

ABSTRACT

Title of Dissertation: ON SUBORDINATION AND THE
 DISTRIBUTION OF PRO

Itziar San Martin, Doctor of Philosophy, 2004

Dissertation directed by: Professor Juan Uriagereka
 Department of Linguistics

This dissertation presents a Minimalist Theory of Control. As for the distribution of PRO, it provides evidence that PRO appears in a configuration of regular Structural Case assignment. This suggests that the complementary distribution between PRO and lexical subjects is not related to Case. It also provides empirical evidence against the Movement analysis of Control, which subsumes Control under Raising, and is compatible with the theoretical view that Theta Roles are configurational, rather than Features. It also renders the so-called Null Case unnecessary.

The interpretation of PRO is the result of the need of the Chain of PRO to collapse with the Chain of the antecedent in order to survive at LF. Specifically, PRO is

a featureless element and it is not in the Numeration. However, the system resorts to the off-line insertion of PRO to the Derivation to satisfy Theta Theory. This is a Last Resort operation that only takes place when there is no other DP in the Numeration to satisfy the existing Theta Roles. Although it appears in a local relation to a Case assigning Probe [+T], the defective nature of PRO makes it unable to host a Case Value. By FI, the Chain of PRO collapses, in the sense of Martin (1996), with a local Chain. This derives the Control effect.

The complementary distribution of NP-trace, PRO and lexical subjects correlates with the degree of defectiveness in the feature composition of T's in each instance. Raising T is Defective ([-T, -person]), Control T is Partial ([+T, -person]) and T in lexical subject licensing is Complete ([+T, +person]). Minimally, [+T] assigns Case to subjects (PRO/lexical). Complete Probes license lexical subjects, where [person] relates to the presence of C. The explanation of why lexical subjects and PRO are in complementary distribution is the following: by Minimality, Partial-T prevents the definition of a Binding Domain. Unlike PRO, lexical subjects need a Domain, and Partial-T does not provide one. Complete-T excludes PRO because Complete-T involves a CP Phase. In this context PRO

lacks an antecedent with which to collapse and the Chain of
PRO violates FI at LF.

ON SUBORDINATION AND THE DISTRIBUTION OF PRO

by

Itziar San Martin

Dissertation submitted to the Faculty of the Graduate School of the
University of Maryland, College Park in partial fulfilment
of the requirements for the degree of
Doctor of Philosophy
2004

Advisory Committee:

Professor Juan Uriagereka, Chair
Professor Norbert Hornstein
Professor Jose Manuel Lacorte
Professor David Lightfoot
Professor Amy Weinberg

©Copyright by
Itziar San Martin
2004

Nire udazkeneko fruituen benetako jabe diren Ama ta Aitari.

To my Parents, to whom the autumn harvest truly belongs.

ACKNOWLEDGEMENTS

Life also seems to have Phases and I feel that I am getting to the end of one with full satisfaction of both my personal and academic requirements so far. As life's cycle continues, I sense a new one coming through a window-edge that foresees great views of opportunities and difficulties. From here, since 1996, I have seen naked winter trees turn into colorful burst of life and for some reason, I feel most convinced than ever that next year will be of no exception.

My deepest gratitude and admiration to Juan Uriagereka, my advisor. From the very beginning, he has taught me all about...almost everything! His great advice, patience, endless support and inspiration combined with a unique ability for linguistic research and demand for quality work will serve an example for the rest of my career.

Thanks to all members of my committee. To start with, the amazingly quick minds of Norbert Hornstein and Amy Weinberg have served perfect for good criticism and improvement. Special thanks to Norbert, with whom I started working closely on the topic of Control in earlier days of my research. I consider myself a very lucky person for having had David Lightfoot helping me with my work. A ten-

minute deep silence- thinking about the puzzles that I have presented... I have learned to patiently look deeply into linguistic matters. My deepest gratitude to Cedric Boeckx, who has kindly commented on earlier drafts of the thesis.

The Linguistic community in the Basque Country deserves special mention. Their endless support and encouragement has ever since startled me. Jon Franco and Jon Ortiz de Urbina in the University of Deusto. In the University of the Basque Country, special thanks to Javi Ormazabal and Myriam Uribe-Etxebarria for their continuous help and support. Also thanks to Pablo Albizu, Xabier Ariagoitia, Arantzazu Elordieta, Gorka Elordieta, Rikardo Etxepare, Beatriz Fernandez, Patxi Goenaga, Itziar Laka, Alazne Landa, and Beñat Oyarcabal.

It would take too long to mention all my informants for all the languages that I have checked. Billions of thanks to you all for providing me with the necessary tools for research.

The following friends colleagues, each one knows what he/she means to me. Chronologically, Aitziber Atutxa, Julien Boullie, Nancy Lyon, Cathy Hoover, Izaskun Aldezabal, Elixabete Murguia and Juan Carlos Castillo. Later, Michael Geiger, Ralf Rütten, Diana Eherhaut, Torsten Wöll, Christian Fried, Mathias Dreher and Olga Chicot. The

Brazilian connection (Acrisio Pires, Max Guimarães, Cilene Rodrigues, Ana Gouvea) for the linguistic discussions, for contributing to make great parties and mostly, for being such natural human beings. Leticia Pablos, Vivienne Lettsome, Jose Lorenzo and Cristina Rodriguez for being great roommates and special friends. In my last years, Luciana Donatto, Gonzalo Martinez, Ramon Fernandez, Sylvia Genari and specially Graciela Tesan. Thanks che for everything.

Back at home, thanks to my kuadrilla for receiving me with such warmth, especially Mireia Jovellar, Susana Fundazuri, Nerea Urrutia, Ainhoa Zabala and my cousin and everlasting friend Lurdes Malaxetxebarria. Also thanks to Alberto Guenaga for his patience and support in earlier days.

Especial acknowledgements to my partner Luis Garmendia for his endless support and encouragement beside me. You really made it all possible in the end.

To my brother and best friend Ruben San Martin for his endless encouragement, support and concern for my well-being. I'll be back.

This thesis is dedicated to my Parents Mari Carmen Egia and Jose Mari San Martin. All I can say is too little. Eskerrik asko. By the way, my mother's amazing dedication

to work, extraordinary intuitions and interest about
Language would have made her an excellent Linguist. Thanks
for guiding me in the opportunity that you did not have.

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION.....	1
1 Subordination	1
1.1 The Case Theoretic account in GB	2
2 The Minimalist Perspective. The Framework	5
2.1 Economy and departure from Perfection	7
2.2 θ roles and Morphological Features	9
2.2.1 PRO and Null Structural Case	10
2.3 The architecture and some Minimalist concepts ...	12
3 In and out	18
3.1 Indicative complements of Propositional predicates	19
3.2 Restructuring Infinitives	26
3.3 Seven questions that need further inquiry	29
4 Overview of the thesis	34
 CHAPTER 2: A NEW TYPOLOGY OF CONTROL.....	38
1 The typology of Control revisited	39
2 The EC vs. PC distinction	47
2.1 Consistency in EC	47
2.2 The PC class across languages	49
2.3 EC vs. PC in subject and object control	52
2.4 EC vs. PC and the nature of the embedded clause .	55
2.4.1 Basque and Portuguese inflected infinitives	55
3 EC and Raising arise in identical contexts	60
4 Conclusion	63
 CHAPTER 3: EXHAUSTIVE CONTROL VERSUS RAISING.....	66
1 Some History	66
2 Movement Theory vs. Case Theory of Control	70
2.1 The Case-Theoretic Approach	71
2.2 The Movement Theory of Control	78
2.3 A comparison	82
3 Selection	85
3.1 From GB to the MP	86
3.2 Raising and EC take TP complements	91
4 Tense as the defining factor between EC and Raising .	98
5 Against Null Case. PRO checks regular Structural Case	104
5.1 Basque Case system	105
5.2 Romanian	114
5.3 Icelandic	118
5.4 Greek	123
5.4.1. Evidence that the null subject is marked	
Nominative	124

6 Conclusion	130
CHAPTER 4: THE CONTRIBUTION OF COMP TO THE SYSTEM.....	133
1 The Distributional Problem	134
1.1 The traditional observation	135
1.1.1 Infinitives with lexical subjects	138
1.1.2 Finite clauses, PRO and Raising	140
1.2 Different Structural conditions: TP vs. CP	143
1.2.1 Subjunctive Complementizers	144
1.2.2 Postverbal subjects.	147
1.2.2.1 Romanian.....	147
1.2.2.2 Modern Greek.....	149
1.2.2.3 Arabic.....	153
1.2.2.4 Italian, some Italian dialects and European Portuguese.....	154
1.2.2.5 For-to in INFL vs. For in Comp. Some comparisons.....	159
1.2.2.6 Scandinavian languages.....	165
1.3 Summary	167
2 The contribution of Comp to the system.	167
2.1 Recapitulation: Raising, PRO and lexical subjects	168
2.2 Basque and Comp [person]	170
2.3 Two relevant questions	175
CHAPTER 5: PRO AS LAST RESORT.....	177
1 Why Partial-T is compatible with PRO but incompatible with lexical subjects.....	177
2 PRO as Last Resort	184
2.1 The existence of PRO.	185
2.2 Some Derivations	186
3 Why Complete T is compatible with lexical subjects but incompatible with PRO.....	198
4 Why only subjects can be controlled	201
5 A psycholinguistics prediction	204
CHAPTER 6: SUMMARY AND CONCLUDING REMARKS.....	206
REFERENCES.....	212

CHAPTER 1: INTRODUCTION

1 Subordination

This thesis explores certain syntactic effects in sentence embedding or contexts of Subordination. Some such contexts include what traditionally have been called 'constructions' of Raising (1a), ECM (1b), Obligatory Control (OC) (1c), Optional Control (OpC) (1d), and finite complements of epistemic predicates (1e).

- (1) a. John seems to be happy.
- b. John believes him to be happy.
- c. John tried to eat the cake.
- d. John wants (for) him to eat the cake.
- e. John said that he was going to eat the cake.

These constructions have raised great theoretical interest, among other things for the variability that they show in terms of restrictions on the interpretation and the distribution of lexical and null embedded subjects.

In terms of the interpretive restrictions, in (1a) and (1c) the null embedded subject is understood as being *John*, the matrix subject. In (1b) and (1d) the pronoun with accusative Case must refer to someone else (third person male) other than *John*. Finally, the embedded subject marked with Nominative Case in (1e) is free to refer either to the matrix subject *John* or to some other salient male individual in the discourse.

Abstracting away from details, we can state that the interpretive relations between the matrix and embedded subjects in (1) saturate the three possible choices: coreference, disjointness (or obviation) and free reference.

- (2) a. Coreference. In Raising (1a) and OC (1c).
- b. Obviation. In ECM (1b) and OpC (1d).
- c. Free reference. In Epistemic contexts (1e).

The possibilities of lexicalizing the embedded subject also vary. In Raising and OC constructions, the understood embedded subject must be phonetically null but necessarily overt in ECM, OpC, and Epistemic contexts¹.

- (3) a. Phonetically null. In Raising (1a) and OC (1c).
- b. Lexical. In ECM (1b), OpC (1d) and Epistemic contexts (1e).

1.1 The Case Theoretic account in GB

The first systematic account of the above facts was presented by Chomsky (1981) in *Lectures in Government and Binding*. The GB framework relied on the Case Module to account for the distribution of lexical NPs. This Module included a Case Filter that dictates that lexical NPs must have Abstract Case, banning the presence of any lexical NP without Case. Case assignment only takes place under Government, defined in terms of m-command (4):

¹ Of course, in all those instances the position would be phonetically null if wh-movement has taken place.

- (4) Government
A Governs B iff
A is a Governor;
A m-commands B;
No barrier intervenes between A and B.
Where
Governors are Lexical Heads and Tensed I.
Maximal Projections are Barriers.

Nominative Case assignment asymmetries were explained through the Finite vs. Nonfinite distinction. Only Finite Complements (i.e. whose head displays Tense and Agreement properties²) license Nominative Case. This accounts for the possibility of the overt subject DP in (1e). The lexical subjects in ECM (1b) and in OpC (1d) are assigned Accusative Case by the matrix ECM predicate and the Prepositional Complementizer (*for*) respectively. In Raising (1a), the absence of any Case assigner forces the embedded subject to raise to the matrix clause.

Finally, because of some complications with Binding Theory, the interpretation of Control constructions forced the postulation of an independent Theory, the Control Module. To start with, the EPP (the requirement that all clauses -finite and nonfinite- have subjects) together with

² In the 80's there was a debate whether Tense or Agreement was the defining property of Finite clauses responsible for Nominative Case assignment. Arguments in favor of Tense are found in Rouveret and Vergnaud (1980), Chomsky (1980) and Guéron and Hoekstra (1988). George and Kornfit (1981), Chomsky (1981), Raposo (1987), and Raposo and Uriagereka (1990) defend the alternative view.

the Theta-Criterion forces the existence of a syntactically active subject, PRO. The distribution of PRO follows from Binding Theory. Unlike other empty categories, the ambiguous feature composition of PRO as being both Anaphoric and Pronominal leaves PRO subject with contradictory requirements: it must be both bound and free in its Governing Category. This situation forces the Anti-Government Condition on PRO, the PRO Theorem, which amounts to saying that PRO does not have a Governing Category. The interpretation of PRO does not follow from Binding Theory, but from the Control Module. Unlike NP-traces, which are interpreted as anaphoric to some antecedent because they are subject to Principle A of Binding Theory, PRO does not have a Governing Category, and hence no Domain where binding might apply. As a consequence PRO trivially satisfies (the otherwise contradictory) Condition A and Condition B of Binding theory. Thus, it is crucial for PRO to appear in ungoverned domains.

Through the notion Government, the GB framework was successful in accounting for the distribution of lexical and empty DPs, but at the cost of what most recent approaches consider too much theoretical complexity. Section 2 is a short presentation of the transition from GB to the MP, the framework of this thesis. Section 3 makes

explicit the types of constructions that I will not discuss in this thesis and the questions that I will be addressing. It includes a list of reasons that call for further inquiry into the topic of Subordination. Section 4 is an overview of the thesis.

2 The Minimalist Perspective. The Framework

The framework for this thesis is the MP version within the Principles and Parameters (henceforth P&P) approach to grammatical Competence. P&P has been successful in providing a programmatic answer to the central problem for grammatical theory: children's ability to acquire grammatical competence despite the impoverished nature of the data. Following Chomsky (1986b), we may call this Plato's problem. In P&P terms, the study of human language starts with the assumption that the human brain is endowed with a cognitive system that allows us to acquire and use language: the Language Faculty. In other words, from birth, children are equipped with an organized set of Principles that constrain possible grammars - Universal Grammar (UG) - that have open Parameters from which grammars for specific languages arise.

Up to the Government and Binding Theory (GB) version of P&P, the degree of success in theories was

overwhelmingly measured by the extent to which they gave an answer to Plato's problem, whereas other methodological standards like naturalness in the theory had less weight. Once the explanatory adequacy ceased to be a prerequisite for success, more methodological standards of theory evaluation were considered. The latest version of P&P, The Minimalist program (MP) (Chomsky 1993, 1995, 2000, 2001), along the lines of other fields in science, uses notions of simplicity, elegance, parsimony, and naturalness as measures of theory evaluation. Indeed, GB was most successful in accounting for common structural properties of languages but, at the cost of what the MP considers too much theoretical complexity. For example, according to GB, grammars emerged through the interaction of different Modules subject to different kinds of well-formedness requirements (Case, Binding, Control, etc). Moreover, GB postulated four different levels of representation at which different conditions apply to filter out illicit Phrase Markers. In the MP, ideally, only levels that are virtually conceptually necessary are considered, i.e. those that reflect the obvious idea that language interfaces with sound (PF) and meaning (LF). Consequently, Principles that applied at D and S-structure are now reformulated in terms of conditions on the well-formedness of the Interfaces.

Government, the basic grammatical notion that gave some conceptual unity to various aspects of GB, should be eliminated and reformulated into a theory based on Bare Phrase-Structure relations or Relations emerging from Phrase-Structure Theory: Head-Complement and Specifier-Head.

2.1 Economy and departure from Perfection

Economy considerations are central to the Program outlined by Minimalism. Linguistic expressions are defined as $\langle \text{PF LF} \rangle$ pairs formed by convergent derivations in an optimal way. Optimality is defined in terms of Methodological and Substantive Economy considerations. The former are standard considerations of the Ockham's razor type: all things being equal, fewer is better, e.g. one primitive relation is better than two, one module better than three, etc. Substantive Economy conditions include least effort notions of locality and well-formedness in the derivation. Shortest Move or Minimal Link Condition (MLC) preempts longer steps, Shortest Derivations prefers fewer steps, Greed permits Movement only if it must take place (i.e. to produce a licit Phrase Marker), Full Interpretation disallows idle symbols in grammatical

representations, and the Inclusiveness Condition disallows addition of novel entities in grammatical operations.

The importance of general Economy considerations in the MP as a metric for theory evaluation suggests asking a new question: how economical is the system in meeting the legibility condition of the interfaces? Ideally, the system would satisfy Full Interpretation through the simple operation Merge, which is independently necessary to form phrases from words. However, the empirical fact that natural languages obviously show displacement calls for at least a second operation Agree (and Move as a combination of Agree and Merge). Agree (and Move) involves morphological (Case, Agreement) features that seem to be uninterpretable to the Interfaces and need to be checked in the overt syntax. From this perspective, although Movement is regulated by Substantive Economy Conditions, some departure from fully optimal design seems unavoidable. The question remains whether these are real imperfections or whether there is some external motivation for displacement that would render [-interpretable] features as optimal solutions to Minimal design specifications. A major project in the MP includes research on the inventory of uninterpretable features.

2.2 θ roles and Morphological Features

In GB, the Case Module that regulated the distribution of NPs included a Case Filter that dictates that every NP must have Abstract Case. In some versions of the theory, the Case Filter was not an independent Principle of the Grammar, but was related to θ theory via the Visibility Condition, which restricts θ marking on DPs only to those that are Visible (i.e. Case marked). Further unification of the two came through the notion Government: θ roles and Case were both assigned under some form of Government³.

In the MP, the domains of θ and Case assignment/checking are disjoint. In Chomsky (1995), θ roles are assigned in lexical domains and Case is checked in higher functional projections. In current terms, arguments enter the derivation only by pure Merge to theta positions, and Case on nominals (the Goal) is valued by a higher functional head (the Probe) that enters into an Agree relation with a local Goal.

One source for Movement is the EPP, regarded as some kind of feature. The EPP, by virtue of being [-interpretable] to the interfaces, drives movement of DPs to Spec of certain Maximal Functional projections

³ However, not in ECM, where clearly the two were dissociated.

independently of movement for Case assigning. The EPP, which was initially presented as the requirement that certain configurations (clauses) need a subject (Chomsky 1981), has survived pretty much unaltered and essentially mysterious until today⁴.

The Theta Criterion has survived into the MP. Since Pure merge of theta positions is required of (and restricted to) arguments, movement from Theta to Theta position is disallowed. In other words, because arguments may only enter the derivation through a thematic position, further movement of arguments into theta positions is not permitted.

2.2.1 PRO and Null Structural Case

Once we take seriously the Visibility Condition on θ assignment at LF, an inconsistency emerges within the GB account of the distribution of PRO. Apart from clauses, PRO is the only element that being assigned no Case receives a θ role.

The fact that PRO is the only nominal element that breaks the Visibility Condition on Theta marking led Chomsky and Lasnik (1993) to propose that PRO checks Null

⁴ See Epstein and Seely (1999), Martin (1999), Castillo, Drury and Grohmann (1999), and Boeckx (2002) for proposals eliminating the EPP.

Case and that Null Case is included within the inventory of Structural Cases. Chomsky and Lasnik (1993) argue that the parallel behavior between PRO and regular DPs in (5-6) with respect to the Freezing Effect (i.e. the prohibition of further A-Movement from Case marked positions) suggests that PRO is a regular argument in that it bears Structural Case. In other words, examples (5-6) show that PRO behaves like regular arguments with respect to the traditional observation (the 'Case Uniqueness Condition on Chains' in Chomsky (1981)) that movement of a DP from a Case position results in ungrammaticality by violating Last Resort. Chomsky and Lasnik (1993) take this argument in favor of the idea that PRO is Case marked.

(5) *I prefer for him_i to seem to t_i that he is clever.

(6) *He prefers PRO_i to seem to t_i that he is clever.

However, Martin (1992a), cited in Bošković (1997), argues that movement from a Case position can be ruled out independently by assuming that the Case markings of the Case checkers must be discharged. Specifically, the movement of PRO from a Case position in (6) results in ungrammaticality because the Case of the preposition *to* remains unchecked. If this is correct, the argument in Chomsky and Lasnik (1993) that PRO is marked with Case is considerably weakened.

The empirical and conceptual issues surrounding the Null Case proposal in Chomsky and Lasnik (1993) will be extensively discussed in Chapter 3. As a preliminary, consider the following facts: it obviously has the desirable advantage of overcoming the GB problem of the Visibility Condition of PRO. However, it faces both empirical and conceptual problems. Empirically, Martin's criticism stated above casts serious doubts on the existence of empirical evidence that supports that PRO is marked with Null Case. One conceptual problem is that no other nominal except PRO can bear Null Case. If Null Case is part of the inventory of Structural Cases, we would like to understand why this is so.

2.3 The architecture and some Minimalist concepts

This section summarizes the relevant goal and recent notions that are at work in the MP. A summary of the general Minimalist considerations was presented earlier in this section. This section will focus on the architecture and the concepts employed in the MP.

The MP is the new version of the Principles and Parameters approach to linguistic competence. The P&P approach suggests that the Language Faculty (henceforth LF) is part of the genetic endowment of humans and thereby

makes the system highly restrictive with respect to the range of possible human languages. The most important benefit of the P&P approach is that it resolves the ancient issue concerning the tension that arises between the search for descriptive and explanatory adequacy (the idea that language structure is largely invariant).

The new question presented in the MP is the question of how well FL is designed. Assuming that FL must meet some legibility conditions so that other systems of the brain are able to access the expressions generated by FL, we may now wonder how close FL is to optimal design specifications. In other words, the new project in the MP is to explore the idea that FL may approach optimal design, i.e., that language is an optimal solution to legibility conditions. Notice that this novel question is unrelated to the question of which is the best theory to account for FL. Rather, it addresses the issue of the 'best design' of the FL itself.

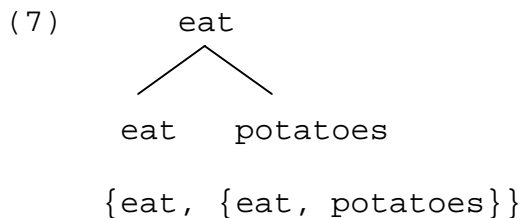
The external systems that impose legibility conditions on the FL are the sensorimotor system and the system of thought. These systems impose the legibility conditions on the two interfaces of the FL, precisely in the interface that interacts with the sensorimotor system, the Phonetic Form (PF), and the level that interacts with the system of

thought, the Logical Form (LF). The legibility conditions that these external systems impose are called 'Bare Output Conditions', i.e., conditions that are not filters or constraints but rather bare, imposed on the interfaces that interact with the systems. The consequence of this is the idea that the only linguistically relevant levels are the interface levels (PF and LF). Moreover, the relations employed by the computational system must only be those required by the interfaces or those that are emergent due to the properties of the computational system itself.

Starting with the architecture, the grammar consists solely of the lexicon and the computational system. The latter contains operations for building structure (see below) and certain principles of derivational economy (see section 2.1 above). Because only phrases that are legible at the interfaces can be employed by the external systems, only those structures that are interpretable at PF and LF will converge (i.e., succeed). If the expression resulting from the derivation meets Full Interpretation at the interfaces, it is said that it converges, and otherwise, it crashes.

Derivations make a one-step selection of a lexical Array (LA) from LEX (lexical Items) and map LA to expressions, dispensing with further access to LEX. The

derivation starts with the selection of Expressions from the LA or the Numeration. The Computational system recursively generates syntactic objects from the objects available in the Numeration by employing the operation Merge. Merge takes two syntactic objects α and β and forms another Phrase Marker $K(\alpha, \beta)$. The nature of the label (k) depends on the element that projects, namely α or β . The operation Merge is motivated by Last Resort: every application of this operation must satisfy some lexical property of either of the elements that is merged. The operation Merge operating on the items *eat* and *potatoes* is illustrated in (7) below.



In order to cut operative complexity, a subset of LA is extracted at each stage of the derivation. This subpart of the LA or Numeration is called Subnumeration. Phases are the natural syntactic objects that arises by computing the derivation with the elements contained in the Subnumeration. vP and CP are Phases. It is within vP that all theta roles are assigned. CPs are full clauses including Tense and Force. In contrast, TPs are not Phases.

Phases satisfy the strong cyclicity condition, whereby the head of a Phase is inert after the Phase is completed, triggering no further operation. The edge of the Phase, however, is accessible to further operations.

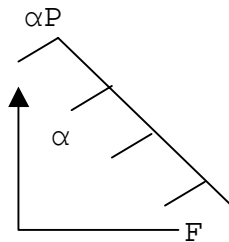
In terms of the features that lexical and functional items contain consider the notions Features, Values and Dimensions. Features are valued dimensions (for example the + in [+plural] is a valued Dimension). The mere Dimension in [+plural] is [plural], and the value would be [+].

Some features are interpretable (to the interfaces) but others are not. The latter are not well understood and, if we are to suggest that Language is the optimal solution to legibility conditions, we must conclude that they are either apparent imperfections of the system or otherwise part of the optimal solution to the legibility conditions that the interfaces impose. Two imperfections are Case and the existence of Movement (see below).

The operation Agree establishes a relation between a Lexical item and a Feature F in its local Domain. Agree copies the value of any valued feature in either the Probe or the Goal onto a matching unvalued feature in the other. It is distinct from Move, which drives overt pied-piping of elements.

As for movement, the idea is that it exists because of the need to eliminate uninterpretable features. In the latest versions of the program, this is translated into an EPP feature contained in a Feature, which triggers movement. The operation Move combines Merge and Agree. It establishes an agreement relation between α and F, and Merges P(F) to α P, as in (8) below. It is assumed that the EPP feature contained in certain heads drives movement of F to [spec α P]. Movement is a more complex operation than its subcomponents Merge and Agree or the two combined. This is why it is a costly and a Last Resort operation.

(8)



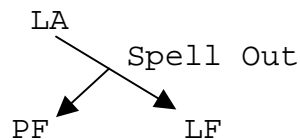
There is an additional operation called Spell-Out. Spell-Out sends the information contained in the part of the structure that has been built to the interfaces. It is an optional and unrestricted operation. If the interfaces cannot interpret it, the derivation crashes.

Let us next consider how the system deals with Case. Case Valuation involves Probe valuation through an Agree relation between a Probe and a Goal, where a Probe X

requires a Value from a Goal Y somewhere in its Domain. For example, the Case on the Goal (DP) makes it visible to the system. In turn, an active feature (Φ features in DPs) of the Goal (DP) can value the dimension in the Probe T.

The resulting picture of the way the derivation proceeds in the MP is illustrated in (9). Notice that the MP dispenses with the GB DS and SS levels:

(9)



3 In and out

This section makes two points explicit about the material that is not covered in the thesis and the reasons for it. Keeping in mind that the goal of this thesis is to study the syntactic effects of contexts of subordination, and that the term subordination includes some type of dependency between the matrix and the embedded clause, I will leave aside indicative complements and Restructuring contexts. As for the former, the reason is that they are clearly independent from matrix clauses (section 3.1). I leave aside the later because they are arguably too defective and unable to host a subject position (section 3.2). In section 3.3 I summarize the specific questions that I address in the thesis.

3.1 Indicative complements of Propositional predicates

Indicative complements of Propositional predicates differ from complements in subjunctive/infinitive⁵ form in the degree of dependency that the embedded clause displays with respect to the matrix clause. Specifically, indicative complements invariably present independence in various aspects with respect to the matrix clause, which suggests that they do not involve true subordination.

First, the embedded subject in indicative complements may always be phonetically overt. Of course, if a particular language displays pro-drop with the subject, silent subjects are allowed. What is relevant is that the subject of indicative complements may invariably be lexical across languages. This correlates with the fact that the embedded subject is free of binding effects such as Control or Obviation. Both these facts are illustrated in the minimal contrasts in Greek, Serbo-Croatian, and Spanish in the examples below. All Indicative complements (10, 12 and 14) allow for lexical subjects that are free in reference. In contrast, the subject in the subjunctive (11, 13) and

⁵ In contrast to the Indicative, which to my knowledge is universally available, I have grouped both the subjunctive and the infinitive options, because some languages lack the latter and employ the Subjunctive form instead.

infinitive complements (15) must be invariably phonetically null and coreferential to a matrix argument.

- (10) I Maria_i ipe [oti o Yiannis tha peksi skaki]. **Greek**
 the Maria said Comp the John will play chess
 'Mary said that John will play chess.'
 [Terzi 1997]
- (11) I Maria_i prospathise [na diavasi Ø_{i/*j}/*o Yiorgos]. **Greek**
 Mary tried-3sg PRT read-3sg George
 Lit. 'Mary tried George to read.'
 [Terzi 1997]
- (12) Kaže [da Petar čita ovu knjigu]. **Serbo-Croatian**
 says-3sg Comp Petar-NOM read-esg this-ACC book-ACC
 'He says that Peter is reading this book.'
 [Jakab 1999]
- (13) Petar_i je pokušao [da *on/Ø_{i/j} dodge]. **Serbo-Croatian**
 Petar Aux tried that he come-3sg
 Lit. 'Petar tried that he come.'
 [Jakab 1999]
- (14) Juan piensa [que María está cansada]. **Spanish**
 Juan thinks Comp María is tired
 'Juan thinks that María is tired.'
- (15) Juan_i cree [*María/Ø_{i/*j} estar enfermo]. **Spanish**
 Juan believes be sick
 'Juan believes himself to be tired.'

Second, phenomena such as Negative Polarity Items (NPI), Positive Polarity Items (PPI), Long Distance Reflexivization, clitic climbing, and Topic preposing display an asymmetric behavior in Indicative and infinitive/subjunctive complements. I will show that the behavior that Indicative complements display suggests that they are opaque and independent with respect to the matrix clause.

To start with, NPIs, which require a clausemate negation, restrict the negative antecedent to the embedded clause in indicative complements to propositional predicates, but not in true subordination contexts, where the Negation can be placed in the matrix clause. This is extensively illustrated in Serbo-Croatian (Progovac 1993), in Czech (Sedivy 1990), Japanese (Hasewaga 1987), Chinese (Progovac 1988), French (Kayne 1981), and Italian (Rizzi 1982) as cited in Progovac (1993). The fact that indicative complements do not allow to place the embedded negative element in the matrix clause suggest that indicative complements are opaque and independent, i.e., that they do not involve true subordination. This is illustrated in the Serbo-Croatian examples (16-17) below.

(16) *Ne tvrđim [da vidim nikoga]. **Serbo-Croatian**
 not claim Comp see no one
 'I do not claim that I can see anyone.'
[Progovac 1993]

(17) Ne želim [da vidim nikoga]. **Serbo-Croatian**
 not wish Comp see no one
 'I do not wish to see anyone.'
[Progovac 1993]

Turning to Positive Polarity Items (PPIs) like *someone*, Progovac (1993) suggests that these elements are pronominal-like in that they display anti-locality behavior. Specifically, when they appear with a clausemate negation, they only have the wide scope reading. In

contrast, with a superordinate negation and elsewhere, they can either take narrow or wide scope. Interestingly, Subjunctive subordination renders the embedded clause 'transparent' and only allows for the wide scope reading. Indicative complements on the other hand, allow for both, wide or narrow scope readings. This shows that Indicative complements constitute a further independent domain where the extra narrow scope reading is licensed. This is illustrated in the Serbo-Croatian examples provided below.

- (18) Mira ne kaže [da je videla nekoga]. (wide/narrow)
 Mira not say Comp is seen someone
 'Mira did not say that she saw someone.'
 [Progovac 1993]

- (19) Ne želim [da vidim nekoga]. (wide scope only)
 not want Comp see someone
 'I do not want to see someone.'
 [Progovac 1993]

The syntactic conditions licensing Long Distance Reflexivization and morphologically simple reflexives provide further arguments in favor of the idea at hand. First, Long Distance Reflexivization is only possible with subjunctive or infinitive complements, never in indicative complements of propositional predicates (Blight 1992, Allen and Greenough 1931), as cited in Progovac (1993)). In other words, in contrast to infinitive/subjunctive complement clauses, indicative complements are opaque and they restrict the antecedent of a Long Distance Reflexive to

their clause. This contrast is illustrated in Latin (20-21), where only subjunctive complements allow Long-Distance Reflexivization.

(20) Caesar_i uult Phaedram_k se_{i/k} amare. **Latin**
 Caesar wants Phaedra self love-Inf
 'Caesar wants Phaedra to love him/herself.'
 [Progovac 1993]

(21) Socrates_i inhonestam sibi Agr credidit **Latin**
 Socrates dishonor to self believed
 Orationem [quam ei_i/*se_i Lysias reo Agr composuerat].
 speech which to him/self Lysias had composed
 'Socrates believed the speech which Lysias had
 composed for him was dishonoring to self.'
 [Progovac 1993]

Second, a widely attested fact about morphologically simple reflexives is that they extend the Domain in Subjunctive clauses but not in Indicatives. Progovac (1993) cites evidence to this effect from Icelandic (Thráinsson 1990, Mailing 1984, Sigurdsson 1990), Italian (Napoli 1979, Giorgi 1984) and French (Pica 1984). Again, this effect suggests that Indicative complements are opaque to Binding relations between matrix and embedded arguments. This is illustrated in the contrast between the Italian examples (22) and (23), the former involving a complement in the subjunctive form and the latter in the indicative shape.

(22) Gianni_i suppone [che tu sia innamorato **Italian**
 Gianni supposes Comp you are-Subj in-love
 della prop_ia moglie].
 with self's wife
 'Gianni supposes that you are in love with his wife.'
 [Progovac 1993]

- (23) *Gianni_i mi ha detto [che tu sei innamorato **Italian**
 Gianni me has told Comp you are-Ind in-love
 della *propia*_i moglie].
 with self's wife
 'Gianni has told me that you are in love with his
 wife.'

[Progovac 1993]

Another set of phenomena that suggests that Indicative complements are opaque is provided by clitic climbing and Topic preposing asymmetries in Indicative and Subjunctive clauses in Serbo-Croatian. Specifically, in this language, clitics are placed in second clausal position (Progovac (1993)). Whereas Subjunctive clauses are transparent in allowing for optional Clitic climbing to the second position of the matrix clause (24), Indicative complements are opaque and force the Clitic to stay in the second position of the embedded clause (25).

- (24) Milan ga_i želi [da vidi t_i]. **Serbo-Croatian**
 Milan him wants Comp sees
 'Milan wants to see him.'

[Progovac 1993]

- (25) *Milan ga_i kaže [da vidi t_i]. **Serbo-Croatian**
 Milan him says that sees
 'Milan says that he can see him.'

[Progovac 1993]

As for Topic preposing, this operation places Topics clause initially, which is strictly clause bound in Indicative complements (26), but may trespass the embedded clause when it is in the Subjunctive Mood (27).

(26) *To ne tvrdim [da sam potpisao]. **Serbo-Croatian**
 this not say Comp am signed
 (lit.) 'This, I don't say that I have signed.'
 [Progovac 1993]

(27) To ne želim [da potpišem]. **Serbo-Croatian**
 this not wish that sign
 'This, I don't want to sign.'
 [Progovac 1993]

To finish showing that Indicative complements are opaque and do not involve true subordination, note the following fact: unlike in true subordination, indicative complements to Propositional predicates allow complete freedom as to the morphological and semantic Tense in the embedded clause. Considering that the degree of dependency between clauses is typically related to the Tense dependency that the embedded clause displays with respect to the matrix tense, it is reasonable to conclude that Indicative complements are independent from the matrix clause. Consider the European Portuguese examples (28-29), where unlike in subjunctive complements (29), there is no sequence of tense restriction⁶ in complements to indicative complements to propositional predicates (28).

⁶ This restriction disallows Past tense specification in the embedded clause if the matrix verb denotes Present or Future Tense, and conversely, matrix past tense forces a Past subjunctive in the embedded clause.

- (28) O Manel disse/diz/dirá que a Maria ***E. Portuguese***
chegou/chega/chegará tarde.
'Manel said/says/will say that Mary arrived/s/will
arrive late.'

[Meireles & Raposo 1992]

- (29) *O Manel deseja que o filho fosse o melhor aluno.
Manel wishes-Pres Comp his son be-Past-Subj. the best
student
(Lit.) 'Manel wishes that his son was the best
student.'

[Meireles & Raposo 1992]

To summarize, the above facts have shown that indicative complement clauses display total independence with respect to the matrix clause. From this, it is reasonable to conclude that they do not involve true subordination. As I anticipated in the introduction to this chapter, I will leave them aside for the purposes of the thesis, and the reason is now clear: this thesis studies the effects that arise in clauses that display dependency between the matrix and embedded clauses, and Indicative complements are opaque to such effects. In the next section, I will justify the reasons for leaving aside another set of phenomena, namely those involving restructuring. I turn to the reasons for this decision below.

3.2 Restructuring Infinitives

On the other extreme within the general realm of subordination, certain Modal, Aspectual, Causative and

Perception verbs in some languages take VPs as complements rather than full clausal TP or CPs (Wurmbrand (1998)). It has been argued that this change from a biclausal structure into a monoclausal type involves the process of restructuring (Rizzi (1978), Burzio (1986), Manzini (1983), Picallo (1990), Wurmbrand (1998)). As I already suggested, I will not consider these contexts in the thesis. Briefly, the reason for this is that they arguably do not contain a subject position and hence, syntactic and binding theoretic effects, which are the object of study of this thesis, are absent in these constructions. I elaborate on this below.

According to Wurmbrand, in contrast to Non-Restructuring infinitives (henceforth NRI), which contain rich functional layers and a subject PRO, Restructuring Infinitives (henceforth RI) lack such structure. This asymmetry provokes various effects. First, Restructuring Infinitives lack the ability to license PRO or an independent Tense. Second, they are unable to host sentential adverbs. Third, they are unable to assign Case to their internal arguments, and finally, they do not count as minimal domains for Binding Theory. Let us consider the later in some detail.

In terms of Binding Domains, we expect that only NRIs and not RIs define a Binding Domain for a pronoun in the

embedded clause, since only NRIs contain a subject position that serves to define the Binding Domain for a pronoun. To illustrate this, consider the Czech example (30) from Rezac (forthcoming). (30) shows that Principle B is violated when a clitic has climbed out to the matrix clause (i.e., when restructuring has taken place). In contrast, when the clitic stays within the embedded clause (i.e., when no restructuring has taken place), the clitic pronoun is able to refer outside its Domain. The contrast demonstrates that NRIs contain a PRO subject that serves to define the Binding Domain for the pronoun.

- (30) Anna_i mu {ji*_{i/j}} dovolila políbit {ji_{i/j}} nahledanou. **Czech**
 Anna him-D her-A permitted kiss-INF her-A goodbuy
 'Anna permitted him to kiss her good-buy.'
 [Rezac forthcoming]

This thesis investigates the relations between matrix and embedded clauses and, specially, the effects of such relations in the subject of subordinate clauses. Thus, the reason for leaving indicative complements of propositional predicates and restructuring contexts aside is that the former involve great independence with respect to the matrix clause, and the latter a too poor structure to hold subjects, since they are arguably bare VPs. The next section specifies the questions that I will be addressing in the thesis.

3.3 Seven questions that need further inquiry

Chomsky's (2000, 2001) Minimalist account of the distribution and interpretation of lexical and empty subjects (the latter arising in Raising and Control) can be briefly summarized as follows.

Raising predicates select for a TP complement with a maximally defective T, which includes no Agreement or Tense information. <def T> cannot check/value the [-interpretable] Case Feature of the embedded DP. However, <def T> still holds a [-interpretable] EPP feature and the DP must visit <Spec TP> before raising to the matrix clause.

Control predicates select for a CP complement with a T that he also names 'defective'. This T however is less defective than T in Raising contexts for its ability to value PRO with Null Case. Each subject, the matrix DP and PRO heads its own Chain, which later somehow collapses for interpretive purposes creating an extended single Chain for deriving the Control effect (Martin 1996).

Epistemic predicates select for CPs that contain a full T that contain the [-interpretable] EPP feature and is able to check/value the [-interpretable] Case Feature of the DP with regular structural Nominative Case.

Chomsky suggests that unlike TPs, CP and vPs are Phases. The motivation for introducing the notion Phase is that it allows for cyclic access to the Numeration, a necessary notion in order to explain the convergence of derivations that in a one-time access to the Numeration would not obey the Merge over Move (MoM) condition. Consider the contrast between (31) and (32) below. In the embedded clause, MoM preempts movement of a *proof* where an Expletive *There* could have Merged only in Raising (31), but not in Control (32). In other words, Merge does not always ban Move.

(31) *There is likely [a proof to be __ discovered].

(32) It is fun [PRO to go __ to the beach].

The solution is to constrain the point at which MoM applies. Chomsky suggests a cyclic access to the Numeration through the notion Subnumeration. Subnumerations build Phases (CP or vP) and, as a result, they cut computational cost in the sense that only part of the Numeration is being considered. MoM considerations apply at the level of the Phase. This implies that MoM will be operative only where the Subnumeration that builds the Phase contains an Expletive. Control predicates take CP phases as complements. (32) converges because the Subnumeration does not contain an Expletive and Movement of PRO does not

violate MoM. In (31) the embedded clause is not a Phase since it is a TP. Thus, the movement of a *proof* violates MoM.

A Phase of a derivation is defined as a syntactic object derived by the presence of a C or v in the Lexical Array (LA), and has the advantage of cutting derivational cost. Chomsky suggests that the intuitive property of CP and vPs is that they are, in some sense, Propositional, the semantic notion of the unit of thought or meaningful expression.

Several questions remain unexplained in the account of the licensing conditions of in Raising, Control (PRO) and lexical subjects:

First, there is a clear correspondence between finite T and its ability to value the Case of DP on the one hand, and Raising/ECM T and its inability to value any Case on the other. However, it is not clear how Control T, being nonfinite and defective follows the finite pattern in the Case valuation process. The two types of <def T> in Raising/ECM and Control need to be distinguished more explicitly if one goes in the direction of attributing Case valuation properties to Control T only. In other words, it is a stipulation to say that Nonfinite Control T is defective but less defective than Raising because Control T

values Null Case. The stipulative flavor of this distinction renders the existence of Null Case suspicious within the system.

Second, the Case theoretic account of the distribution of PRO is inelegant in the sense that only PRO bears the structural Case called Null Case. Neither lexical DPs nor other phonetically null expressions bear it.

Third, while in Raising the interpretation of the understood subject follows straightforwardly from the Chain formed by movement, Control still needs a more complex mechanism for a correct interpretation. Needless to say, an account such as Hornstein's (1999) Movement analysis of Control is preferred unless further evidence calls for a more elaborate theory of Control.

Fourth, given Minimalist considerations, the question remains whether a formative like PRO exists at all. Other null formatives such as traces are now understood as copies, part of the residue of the copy-deletion process that is necessary to form <PF LF> pairs.

Fifth, the traditional typology of Control needs updating. Landau (1999) suggested that, in light of asymmetries of the sort in (33-34), where only predicate try forces strict identity between subjects, OC predicates come in two varieties: those that require strict identity

(Exhaustive Control) and those that allow for looser coreferential possibilities (Partial Control). This contrast arises when in the embedded clause a collective predicate forces the referent of PRO to be the controller plus some salient entity in the discourse. Collective predicates are only allowed in complements of Partial Control predicates.

(33) John_i told Mary that he dared PRO_i to meet at six.

(34) John_i told Mary_k that he wanted PRO_{i+k} to meet at six.

Sixth, Chomsky considers complements of Control predicates Phases of the CP type. Were they not, MoM would prefer the insertion of the Expletive (36) instead of moving PRO in examples like (35)

(35) It is about time [PRO_i to t_i leave].

(36) *is about time [it to PRO leave]

However, as I will show in chapter 3, the embedded clause in (35) is not comparable to a genuine Control complement. I will argue that genuine control complements do not form Phases, since they do not pass any of the diagnosis for Phases. This raises the question whether the complements of Control predicates are CPs or TPs, and whether categorial selection has any relevance to Control Theory. Quite relevantly, Bošković (1997) argues (contra Chomsky) for a minimalist reduction in Nonfinite complementation by

suggesting that all infinitival complements that are not introduced by overt Complementizers should be considered TPs.

Seventh, the distribution of lexical subjects vs. PRO is traditionally related to the Finite vs. nonfinite nature of the embedded clause, respectively. This is also assumed in the Minimalist Program, where PRO only arises in certain nonfinite contexts. As other researchers have shown, finiteness does not correlate with the existence of Case or lexical subject licensing (Roussou 2001). If Finiteness does not explain the distribution of lexical subjects vs. PRO, we should identify the precise syntactic context in which each arises.

4 Overview of the thesis

The central claim of this thesis is that PRO appears in a configuration of regular Structural Case assignment. Under the standard assumption that Last Resort bans movement from Case to Case positions, this is empirical evidence against the Movement analysis of Control, which subsumes Control under Raising. In addition, the absence of evidence that PRO receives Null Case suggests that the Null Case-Theoretic approach is not adequate inasmuch the

postulation of a special structural Case (Null Case) is unnecessary.

In terms of the distribution of Raising, PRO and Lexical subjects, I argue that (i) in view of the empirical facts, the traditional explanation relying on the notion finiteness cannot be correct, and (ii) Raising and PRO are licensed in TPs whereas lexical subjects appear in CPs. Raising T differs from Control T in that the former is [-T] and the latter [+T]. I suggest that it is [+T] that assign regular Case to nominals, including PRO. Turning to the distribution of PRO and lexical subjects, the presence of Comp in the latter endows T with the [person] feature, which renders the T Probe Complete. This spells out the traditional idea that different degrees of defectiveness are involved in Raising Control and Lexical subject licensing, and can be summarized as in (37).

(37)

	T	Presence of Comp	Nature of T
NP-t	[-T]	NO [-person]	Defective [-T, -p]
PRO	[+T]	NO [-person]	Partial [+T, -p]
DP	[+T]	YES [+person]	Complete [+T, +p]

The interpretation of PRO derives from its nature and the way the system makes use of it. Lexical nominals

contain features (phi-features, binding features, and Case) and enter the derivation from the Numeration. Assuming that elements in the Numeration are tokenized as distinct, by the Conservation Law (Martin and Uriagereka, forthcoming) they will be interpreted as distinct at LF. In contrast, I argue that PRO does not have any features per se, which suggests that it is not in the Lexicon/Numeration. I claim that PRO is an expletive-like element and that it enters the derivation off-line as Last Resort (just when there is no DP left in the Numeration to saturate the existing Theta Roles) to prevent the derivation from crashing in Theta Theoretic terms. PRO appears in a Case assigning configuration but, because of its defective morphological feature make-up, it cannot Host the Case. Thus, the Chain of PRO cannot remain identified by any mechanics (by entering the derivation from the Numeration or by Hosting Case) and it will violate FI at LF. The only way for PRO to survive is to collapse with a local well-formed and interpretable chain, the subject or the object in subject control and object control respectively.

This mechanics of Control and the typology of Ts in (37) explain why PRO and DPs are in complementary distribution: I argue that, in contrast to Complete T, Partial T prevents a definition of Domain for Binding in

Minimalist Terms. Thus, lexical subjects are incompatible with Partial T because they would violate Binding theory. In contrast, PRO has no Binding features and no violation occurs in this context. On the other hand, Complete T is incompatible with PRO not because of Binding, but precisely because Complete Ts are embedded under a CP projection (see 37). CPs are Phases, and PRO does not have an 'antecedent' within the Phase with which it can collapse. PRO remains unidentified at LF, a violation of FI.

CHAPTER 2: A NEW TYPOLOGY OF CONTROL

This chapter is a review of the typology of Control proposed in Landau (1999). Keeping in mind that one of the central goals of this thesis is the quest for a correct analysis of control, it is necessary to acknowledge the observation in Landau (1999) that not all OC predicates behave alike as has traditionally been assumed.

I will make two claims in this chapter. One is that the distinction in the Obligatory Control class presented in Landau (1999) between Exhaustive Control (EC) and Partial Control (PC) predicates is real in various respects: first, EC invariably involves strict coreference with a controller, whereas PC allows for looser coreferential possibilities across languages. Unlike Landau's definition of PC, where PRO must include the controller and optionally may refer to some salient entity in the discourse, I observe that, in many languages, PC predicates often allow for the embedded subject to be entirely free in reference. Second, the distinction between EC and PC not only applies to subject control but also to object control. Third, EC and PC involve visibly distinct complement clauses in various languages.

After acknowledging the existence of the EC vs. PC split, I make the decision to leave PC predicates aside and consider only EC contexts in the study of a theory of control in later chapters. The reasons for this decision are the following: first, PC does not involve strict identity between the controller and PRO, and this raises the question whether PC involves control at all. Second, if PC were part of the phenomenon to be studied within control, we would have to discard the Movement Theory of Control (Hornstein 1999) as correct from the onset. However, in view of the possibility that PC may not involve control, it is fair to consider only EC predicates in the study of control.

The second claim I will be making is that, in contrast to EC and PC, Raising and EC apparently arise in similar syntactic environments. Although not conclusively, this latter fact initially supports the Movement analysis of Control which equates the mechanics of Control to Raising (O'Neil 1995; Hornstein 1999, 2001), a possibility that I will call into question in chapter 3.

1 The typology of Control revisited¹

¹ I will set aside Adjunct Control in this thesis.

This section reviews the typology of control. It includes the structural and interpretive differences of the types of control that have been proposed in the literature. After presenting the traditional OC and NOC distinction, I briefly summarize the proposal in Landau (1999) that OC comes in two varieties: EC and PC.

Control in the literature is generally meant as initially discussed in Postal (1970), whereby an understood argument of a complement or an adjunct clause is related to an explicit element occurring elsewhere in the sentence. As in Raising, where we find subject to subject and subject to object dependencies (i.e. ECM), in Control there are basically two types of control relations in terms of the arguments that are involved: Subject Control (1) and Object Control (2) (subject-to-subject and subject-to-object dependencies, respectively). The major difference between Raising and Control is that, in control constructions, the matrix predicate bears a direct argumental relation to the controller, i.e. the matrix predicate assigns a θ role to the Subject/Object and imposes selectional restrictions on it. Thus, the controller in the matrix clause must be agentive as shown by (1-2) below:

(1) John/*the book tried to move a lot.

(2) John forced Mary/*the book to move a lot.

It has long been noted (Williams 1980, Chomsky 1981, Bresnan 1982, Manzini 1983, Bouchard 1984, Koster 1984, Lebeaux 1985, Martin 1996, Manzini & Roussou 1998, Wurmbrand 1998b, Hornstein 1999 & 2001, Landau 1999 & 2001) that the phenomenon of Control includes at least two types of Control: Obligatory Control (OC) and Non Obligatory Control (NOC), exemplified in (3) and (4) respectively.

(3) John_i tried [PRO_i to behave himself_i].

(4) John_i thinks that [PRO_{i/arb} shaving] is important.

The immediate interpretive difference between OC and NOC is that, in the former, the phonetically empty subject standardly represented as PRO is invariably controlled by its antecedent. In the latter, exemplified in (4) above, PRO may be controlled by *John* but it may also have an arbitrary interpretation. This is shown by the contrast in (5-6). NOC, unlike OC, can bind an arbitrary reflexive:

(5) John_i tried [PRO_i to behave himself_i/*oneself].

(6) John_i thinks that [PRO_{i/arb} shaving himself_i/oneself] is important.

Landau (1999) reviews the criteria that have traditionally distinguished OC from NOC. Specifically, he suggests that not all traditional criteria are valid for the OC vs. NOC distinction. Let us review them briefly.

To start with, (5-6) above have shown that the arbitrary Control reading is only available in NOC.

Second, the possibility of Long-Distance Control shows that a closer antecedent for PRO can be skipped for a further controller. This is only possible with NOC.

(7) *John_i knew that Mary tried [PRO_i to shave himself].

(8) Mary_i knew that it damaged John [PRO_i to perjure herself].

[Landau 1999]

Third, OC PRO only permits a sloppy interpretation under VP-ellipsis. NOC PRO permits an additional strict reading. In (10) either John's or *Bill's resume* can be at issue in the elided VP.

(9) John tried [PRO to leave early] and Bill did too.
(=Bill to win)

[Bouchard 1985]

(10) John thinks that [PRO getting his resume in order] is important and Bill does too. (=Bill's or John's)

[Lebeaux 1985]

Fourth, only the 'de se' interpretation is available in OC. In contrast, NOC PRO allows an additional 'non-de se' interpretation. In (11) 'the unfortunate' can only expect of him/herself to be the medal recipient. In contrast, in (12) the recipient of the medal does not need to be the unfortunate him/herself, i.e. it can have a non-de se interpretation.

- (11) The unfortunate expects [PRO to get a medal].
[Higginbotham 1992]
- (12) The unfortunate believes that [PRO getting a medal]
would be boring.
[Higginbotham 1992]

Fifth, Landau (1999) argues that the condition that the antecedent must c-command PRO with OC but not with NOC predicates is not valid, since it is not a necessary condition that distinguishes between OC and NOC. The evidence is provided in (13), where OC holds but the controller inside the matrix object fails to c-command PRO.

- (13) Yesterday, it spoiled Mary's_i mood [PRO_i/*Arb. to listen to the news].

Finally, Landau shows that the traditional assumption that the possibility of having split antecedents distinguishes between OC and NOC is not correct. The common assumption is that OC, unlike NOC, does not license split antecedents. However, (14-15) show that split antecedents are sometimes licensed with OC:

- (14) John_i promised his son_k [PRO_{i+k} to go to the movies together].
- (15) John_i persuaded Mary_k [PRO_{i+k} to kiss in the library].

The chart in (16) summarizes the criteria that Landau considers as valid for distinguishing between OC and NOC.

(16)

	Arbitrary Control	Long- Distance Control	Strict- Reading of PRO	De re reading of PRO
OC	✗	✗	✗	✗
NOC	✓	✓	✓	✓

According to Landau, whether the infinitive displays OC or NOC properties is directly related to the structural position where the infinitive occurs. Landau suggests that OC typically arises in transparent infinitives, when the infinitive is in complement position. NOC occurs in islands, i.e., where the infinitive is placed in subject or adjunct position.

Within the general rubric of OC, not all predicates behave the same way. A class of predicates allows for a looser coreferential relation between arguments than OC does. Martin (1996) and Landau (1999) provide explicit accounts of this fact. Landau calls this incomplete type of control Partial Control (PC), and concludes that OC comes in two varieties: Exhaustive Control (EC) and PC. The difference between the two is that PRO in EC environments must be strictly coreferential to the Controller. This is not the case with PC predicates, where the reference of PRO must include the controller but, at the same time, it may also refer to some salient entity in the discourse. The test to distinguish between EC and PC goes as follows: by

including a collective predicate in the embedded clause, PRO is forced to be coreferential to more than one argument (usually the Controller and some salient entity in the discourse). EC predicates (e.g. *manage*) disallow this option (17), but PC predicates (e.g. *prefer*) are perfectly grammatical under these circumstances, as shown by (18):

(17) *John_i managed [PRO_{i+} to gather at 6].

(18) John_i preferred [PRO_{i+} to gather at 6].

Landau suggests that the semantic properties of the matrix predicate determine the type of OC involved. In general, predicates of an Aspectual sort (*begin, start, etc.*), a Modal sort (*have, need, may, etc.*), and an Implicative sort (*dare, manage, avoid, etc.*) induce EC. In contrast, predicates of a Factive sort (*like, regret, loath, etc.*), a Propositional sort (*believe, think, suppose, etc.*), a Desiderative sort (*want, prefer, hope, etc.*), or an Interrogative sort (*wonder, ask, know, etc.*) are responsible for the PC effect. The following pairs taken from Landau (1999) illustrate his claim that the EC/PC split does occur in English.

(19) *John told Mary that he managed to meet at 6 today.

(20) John told Mary that he preferred to meet at 6 today.

(21) *The chair dared to convene during the strike.

(22) The chair decided to convene during the strike.

(23) *John told Mary that he had to separate before it is too late.

(24) John told Mary that he wished to separate before it is too late.

Landau also argues that predicates that optionally take 'for-to' infinitives (25) and Interrogative complements (26), which have long been considered as NOC, are in fact PC predicates. They display all OC properties summarized in (16) above (no Arbitrary Control, Long Distance Control, unavailable Strict reading under ellipsis, and required de se reading). Furthermore, the type of OC induced by such predicates is PC as (27-28) show, where PRO in the embedded infinitival clause refers to the controller plus some salient entity in the discourse.

(25) John wanted (for Mary) to win the game.

(26) John wondered how to win the game.
[Landau 1999]

(27) John₁ told Mary₂ that he wanted PRO₁₊₂ to separate before it is too late.

(28) Mary₁ thought that John₂ didn't know where [PRO₁₊₂ to go together].
[Landau 1999]

To summarize, apart from the well attested, traditional, NOC and OC distinction, we need to acknowledge the existence of two types of OC: one that requires strict identity between the controller and the understood subject

(EC), and one where the reference of PRO includes the controller and some salient entity in the discourse (PC).

2 The EC vs. PC distinction

In this section, I will show that the split in OC between EC and PC is real in the following senses.

First, whereas EC predicates universally require strict identity of PRO with the controller, PC predicates allow for a looser coreferential possibility of PRO. I will show that PC predicates do not behave uniformly across languages: in some languages, PC predicates behave as described by Landau (i.e., PRO must include the controller and some salient entity in the discourse), and other languages allow the embedded subject to be free in reference. Second, the distinction between EC and PC is attested in both subject control and object control. Finally, the complement type that EC and PC predicates take is syntactically visibly distinct in various languages. All this supports the idea in Landau that not all OC predicates display a uniform behavior and that the split is between the predicate classes that he suggests.

2.1 Consistency in EC

By observing crosslinguistic data involving EC predicates, we arrive at the following conclusions: (i) the embedded subject must be strictly coreferential to the matrix controller and (ii) the embedded subject must be phonetically null². (29-36) below exemplify these properties of EC with subject control predicates³.

- (29) Trebuie să mîncam ceva. **Romanian**
 must Subj. eat-1pl something
 'We must eat something.'
 [Rudin 1988]
- (30) Zaboraviv da go napravam toa. **Macedonian**
 forgot-1sg Subj. it do-1sg that
 'I forgot to do that.'
 [Rudin 1988]
- (31) János elkezdett beszélni. **Hungarian**
 Janos started talk-INF
 'Janos started to talk.'
 [Farkas 1992]
- (32) Juan empezó a hablar. **Spanish**
 Juan-Nom started talk-INF
 'Juan started to talk.'
- (33) *hawala Zaydun [ʔan yarhala amrun]. **Arabic**
 tried-3sg Zayd-NOM Subj. leave-3sg amr-NOM
 (Lit.) 'Zayd tried amr to leave.'
 [Soltan 1996]
- (34) Jon_i [GAP_{i/*k}/*hura ogia egiten] hasi da. **Basque**
 Jon-ABS he-ABS bread-Det-ABS maek-Nom-Loc start
 Aux(3ABS)
 'Jon has started making bread.'

² Contra the proposal here, Borer (1989) argues that controlled subjects may be lexical.

³ In section 2.3 we will see that the generalization carries over to object control.

(35) E āhei ia [ki te haere]. **Maori**
 nonpast able he ki te go
 'He is able to go.'

[Chung 1978]

(36) *E āhei ia [ki te haere ia/a Hōne]. **Maori**
 nonpast able he ki te go he/prop John
 (lit.) 'He is able that he/John should go.'

[Chung 1978]

Notice the important fact that the inability to support lexical subjects in EC environments is at first sight surprising for some languages exemplified above (Arabic, Romanian, Serbo-Croatian, etc.), considering that they use the same type of complements (subjunctive complements with full agreement markers) with other predicates that do license lexical subjects in the embedded clause.

To summarize, EC predicates display the following properties across languages.

(37) The embedded subject must be phonetically null.

(38) The embedded subject must be strictly coreferential to the matrix controller.

2.2 The PC class across languages

The idea that PC predicates allow for looser coreferential relations between the relevant arguments finds strong crosslinguistic empirical support. Recall that Landau defines PC environments as contexts where PRO must include the controller and some salient entity in the

discourse. In contrast, I will show that, in many languages, the requirements on the reference of PRO are even looser: PC predicates may take complements whose subjects are free in reference.

The following examples illustrate PC predicates relating subjects (i.e. subject Control). Consider first the Greek case, a language that has lost the Infinitive (Joseph 1983) and employs the subjunctive in all embedded contexts. Examples with the PC volitional predicate *want* are provided in (39-40):

(39) Thelo [na tin do]. **Greek**
want-1sg Subj. her see-1sg
'I want to see her.'
[Rudin 1988]

(40) Thelo [na mou grapsi kati]. **Greek**
want-1sg Subj. me write-3sg something
'I want her to write something.'
[Rudin 1988]

Both EC and PC predicates in Greek take subjunctive complements with predicates that display full agreement markers. Unlike EC contexts, PC contexts allow distinct agreement markers in the matrix and embedded predicate (40), signaling that there is no strict coreference requirement between subjects, and that the embedded subject may be disjoint in reference from the controller. (41) below includes agreement markers in 3rd person that match in number, and it shows that the embedded subject is free to

refer either to the matrix subject or some salient entity in the discourse.

- (41) O Janis_i theli na GAP_{i/k} erthi. **Greek**
John-NOM wants Subj. come-3sg
'John wants to come/for him to come.'
[Alexiadou & Anagnostopoulou 1999]

Although in (41) there is a preference for getting the coreference reading when the embedded subject is phonetically null, and the disjoint reference reading when the embedded subject is overt, the fact that both readings are available indicates that the embedded subject in PC contexts is essentially free in reference in Greek. As Comorovski (1986) notes for identical facts in Romanian, the preferences are plausibly attributed to the Avoid Pronoun Principle in Chomsky (1981). Greek, being a pro-drop language, disfavors a lexical subject that is close to the antecedent in the discourse. Parallel situations are found in other languages like Romanian (42-43), Basque (44) or Arabic (45).

- (42) Ion_i speră să fie (Agr_{i/k}) fericit. **Romanian**
Ion hopes Subj. be-3sg.Subj. happy
'John hopes to be happy/him to be happy.'
[Sorin 2001]

- (43) Mihai vrea (ca mâine) să plece la Braşov. **Romanian**
Mihai wants Comp tomorrow Subj. leave-3sg at Brasov
'Mihai wants to leave/him to leave for Brasov tomorrow.'
[Alboiu & Motapanyane 2000]

- (44) Jonek_i [zuk/GAP_{i/k} ogia egitea] pentsatu du. **Basque**
 Jon-ERG you-ERG bread-det-ABS make-Nom-Det-ABS decide
 Aux (3ABS-3ERG)
 'Jon has decided/planned to make bread/that
 you/someone else make bread.'
 [San Martin & Uriagereka 2002]
- (45) rafada Zayd-un_i GAP_{i/k} ?an yarhala. **Arabic**
 refused-3sg Zayd-Nom Subj. leave-3sg
 'Zayd_i has refused pro_{i/k} to leave.'
 [Soltan 1996]

To summarize, in contrast to Landau's definition of PC for English contexts, the above examples from various languages show that complements to PC predicates may license subjects that may be disjoint in reference from a potential controller. The fact that, in PC contexts, the embedded subject is free and that it may be phonetically overt indicates that we are facing instances of *pro* rather than *PRO* in the languages exemplified in this section. See chapter 4 and 5 in this thesis for a proposal of how lexical subjects or *pro* (vs. *PRO*) are licensed.

2.3 EC vs. PC in subject and object control

This section shows that the properties related to EC vs. PC in subject control in sections 2.1 and 2.2 above also carry over to object control contexts. This reinforces further the idea that the split between EC and PC predicates is real and that it is not a phenomenon that can

be attributed to some special structural characteristic of subject control.

Object Control predicates fall into EC or PC depending on the semantic class they belong to. For instance, predicate *force*, which is an implicative predicate, invariably induces EC across languages. The embedded subject must be phonetically null and strictly coreferential to the matrix object controller. These properties are illustrated in the examples (46-49) from unrelated languages.

- (46) Ana je naterala Mariju_i da GAP_{i/*k} dodge. **Serbo-Croatian**
Ana Aux forced Mary Subj. come
'Ana forced Mary to come.'
[Farkas 1992]
- (47) Ion_i a forțato pe Maria_k GAP_{k/*i,*j} să plece. **Romanian**
Ion has forced Mary Subj. leave
'Ion has forced Mary to leave.'
[Farkas 1992]
- (48) *ʔajbara Zaydun amran [ʔan tarhala Hindun.] **Arabic**
forced-3sg Zayd-NOM amr-ACC Subj. leave-3sg Hind-NOM
(lit.) 'Zayd forced amr for Hindi to leave.'
[Soltan 1996]
- (49) Jonek Maria [GAP ogia egitera] behartu du. **Basque**
John-ERG Mary-ABS bread-Det-ABS make-Nom-ALL force
Aux(3ERG-3ABS)
'John has forced Mary to make bread.'

Turning next to predicates of the PC class in object control, the crosslinguistic picture shows that the properties of embedded subjects in PC contexts are parallel to the ones attested for subject control. Unlike in

English, in many languages, the embedded subject is free (it does not need to include the referent of the controller), and it may be phonetically overt. These properties are illustrated in (50-53) below:

- (50) Jonek niri_i [semeak/GAP_{i/k} ogia egitea] **Basque**
 Jon-E I-D son-E bread-Det-A make-Nom-A
 debekatu dit.
 prohibit Aux (3A-1D-3E)
 Lit. 'John has prohibited me for the son to make bread.'
- (51) sto telos ton episa [na fiyune pro]. **Greek**
 at-the end him persuaded I Subj. leave-3pl
 'At the end I persuaded him for them to leave.'
 [Philippaki-Warburton 1987]
- (52) ?aqna-a Zayd-un_i amr-an_k [?an yarhal-a pro_{i/k/j}]. **Arabic**
 persuaded-3sg Zayd-NOM amr-ACC Subj. leave-3sg
 Lit. 'Zayd persuaded amr to leave/someone else to leave.'
 [Soltan 1996]
- (53) ?aqna-a Zayd-un_i amr-an_k [?an y(OT?)arhal-a **Arabic**
 persuaded-3sg Zayd-NOM amr-ACC Subj. leave-3sg
 Hind-un_j]
 Hind-NOM
 Lit. 'Zayd persuaded amr for Hind to leave.'
 [Soltan 1996]

To summarize, this section has shown that the properties that cut across the distinction between EC and PC in subject control also hold for object control. The effects that PC predicates induce across languages are (i) free reference of the embedded subject (ii) the possibility of the subject to be phonetically overt. The fact that the effects of EC vs. PC hold in both subject and object

control strengthens the idea that the distinction within OC predicates between EC and PC predicates is well founded.

2.4 EC vs. PC and the nature of the embedded clause

Considering the interpretive distinctions between subjects in EC and PC contexts, it is not surprising to find that EC and PC predicates display structural differences in the complements that each type of predicate takes. The fact that, in some languages, EC and PC predicates take structurally distinct complement clauses strengthens the distinction between the EC and PC predicate classes. The following section describes such structural differences in Basque and European Portuguese.

2.4.1 Basque and Portuguese inflected infinitives

Basque and Portuguese employ infinitives in complements of EC and PC predicates, but the complements in each instance differ in important respects. The generalization is that 'inflected infinitives' are never selected by EC predicates.

In Basque, the generalization is that PC predicates invariably select for clauses marked with structural Case, which is reflected via agreement in the matrix auxiliary. In contrast, EC predicates select for Infinitival clauses

that are not themselves marked with structural Case⁴ (hence the absence of agreement with the embedded clause in the matrix auxiliary). The paradigm from San Martin & Uriagereka (2002) is illustrated in (54-57) below. (54) and (56) involve EC, whereas (55) and (57) are instances involving PC predicates. Notice that (54) and (55) involve subject control, and (56) and (57) are object control constructions.

- (54) Jon_i [PRO_i ogia egiten] saiatu da. **Basque**
 Jon-ABS bread-Det-ABS make-Nom-INN try Aux (3ABS)
 'John has tried to make bread.'
- (55) Jonek_i [GAP_{i/j} ogia egitea] pentsatu du. **Basque**
 Jon-ERG bread-det-ABS make-Nom-Det-ABS decide Aux
 (3ABS-3ERG)
 'Jon has decided/planned to make bread.'
- (56) Jonek ni_i [PRO_i ogia egitera] bidali nau. **Basque**
 Jon-ERG I-ABS bread-Det-ABS make-ALL send Aux (3ERG-1ABS)
 'Jon has sent me to make bread.'
- (57) Jonek niri_i [GAP_{i/j} ogia egitea] gomendatu dit. **Basque**
 Jon-ERG I-DAT bread-Det-ABS make-Nom-Det-ABS recommend
 Aux (3ERG-1DAT-3ABS)
 'Jon has recommended me to make bread.'

⁴ There are a few exceptions to this generalization. For example, predicate 'forget' (*ahaztu*), which induces EC, invariably selects for an embedded clause marked with structural Absolutive Case, as the following example shows:

- (i) Joni_i [GAP_i ogia erostea] ahaztu zaio.
 Jon-DAT bread-Det-ABS buy-Nomin-Det-**ABS** forget
 Aux (3ABS-3DAT)
 'John forgot to buy bread.'

However, San Martin (1999) and San Martin & Uriagereka (2002) note that this is related to the Dative experiencer on the matrix subject.

In all cases of EC, namely (54 & 56), the embedded subject must be phonetically null and strictly coreferential to the matrix subject or object, depending on whether the relation is of the Subject Control or Object Control type. This is expected from EC predicates. Interestingly, the embedded subject in all PC contexts (55 & 57) may be lexical as shown in (58-59) below, and no strict coreference is required between the involved arguments. This suggests that the embedded null subject in all cases of PC is *pro* instead of *PRO* in Basque⁵.

- (58) Jonek [pro/zuk ogia egitea] pentsatu du. **Basque**
 Jon-ERG you-ERG bread-Det-ABS make-Nom-Det-ABS decide
 Aux (3ABS-3ERG)
 'Jon has decided/planned that you make bread.'
- (59) Jonek niri [pro/zuk ogia egitea] gomendatu dit. **Basque**
 Jon-ERG I-DAT you-ERG bread-Det-ABS make-Nom-Det-ABS
 recommend Aux (3ERG-1DAT-3ABS)
 'Jon has recommended me that you make bread.'

The fact that, in Basque, EC and PC predicates invariably select for complement clauses that are structurally distinct suggests that the proposal distinguishing between EC and PC predicate classes within the OC class is well justified.

Similarly, in European and Brazilian Portuguese, EC predicates contrasts with PC in that the former invariably select for uninflected infinitival clauses.

⁵ See Ortiz de Urbina (1989).

European and Brazilian Portuguese make use of several types of complement clauses: Infinitives, Inflected Infinitives and Subjunctive clauses (Raposo 1987 and references therein). Although the situation with PC predicates seems to be somewhat complex, Pires (2001) argues that EC predicates contrast with PC in that the former invariably select for uninflected infinitival clauses (60-61). PC predicates like *want* may select for Uninflected Infinitivals or Subjunctive complements, depending on whether the matrix and embedded subjects are coreferential (62) or disjoint in reference (63) respectively (Pires, p.c.).

- | | |
|--|-------------------|
| (60) Eles evitaram [salir].
They avoid-3pl go-out-INF
'They avoided going out.' | Portuguese |
| (61) *Eles evitaram [salirem].
They avoid-3pl go-out-3pl
'They avoided going out.' | Portuguese |
| (62) Nos queremos [viajar].
we want-3pl travel-INF
'We want to travel.' | Portuguese |
| (63) Nos queremos que tu viajes.
we want Comp you travel-Subj-2sg
'We want you to travel.' | Portuguese |

The mystery of how lexical subjects are licensed in Inflected Infinitivals in European Portuguese and Basque is possibly unified (Ortiz de Urbina 1989, Pires 2001). The unifying factor is that lexical subjects are licensed

internal to the embedded clause only when the clause itself bears structural Case. The classical explanation (Raposo 1987) is that lexical subjects get Case via transmission, whereby embedded Agreement assigns Case to the embedded subject only when AGR is itself Case marked. In Basque, this takes place when the embedded clause is marked with structural Case. In European Portuguese when there is an external Case assigner for embedded AGR.

Interestingly, the same mechanism has been proposed for English clausal gerunds (Reuland 1983, Pires 2001), where only Case marked gerund clauses license lexical subjects. The contrast is illustrated between (64) and (65-66). The clausal gerund in (64) is not in a Case position and this correlates with the inability to license an internal lexical subject. In contrast, the clausal gerunds in (65-66) are in case positions and lexical subjects are licensed internally.

(64) *It is expected [John reading the book].

(65) [John reading the book] was preferred.

(66) I prefer [reading the book].

As expected, clausal gerunds selected by EC predicates cannot appear in Case positions. The reason for this is that if they could, they would license internal lexical

subjects, a property of PC rather than EC. This is shown to be true in (67-68) below.

(67) *[reading the book] was tried/avoided/failed.

(68) [reading the book] was preferred.

The details of how lexical subjects are licensed will be addressed in Chapters 4 and 5. For present purposes, suffice it to note that the distinct nature of the embedded subject in EC and PC contexts empirically correlates with distinct complement types/syntactic contexts in which each type of relation is licensed across languages.

To summarize, in this section I have shown that complements of EC predicates display different properties from those of the PC class. EC invariably involves strict coreference with a controller. In contrast, I have observed that, in many languages, PC predicates often allow the embedded subject to be entirely free in reference. Moreover, the distinction between EC and PC not only applies to subject control but also to object control. Finally, EC and PC involve visibly distinct complement clauses in various languages. All this suggests that the claim in Landau (1999) that not all OC predicates behave alike is correct.

3 EC and Raising arise in identical contexts

This section brings to our attention the fact that, unlike EC and PC, EC and Raising arise in very similar syntactic contexts. The relevance of this fact is that there are proposals that equate the mechanics of Control to Raising, which would be initially and partially supported by the fact that they emerge in a priori similar structural conditions.

Consider (69-70), prototypical instances of EC and Raising respectively.

(69) John_i tries [Ø_i to eat the cake].

(70) John_i seems [Ø_i to be sick].

Generative Grammar has traditionally distinguished Control from Raising since its early days (Rosenbaum 1967). Raising is considered to be a product of movement (subject-to subject raising), whereas Control involves a formative that does not raise to the matrix clause (see details of the comparison in chapter 3). The immediate difference is that in Control, the matrix and embedded subjects receive a thematic role from the matrix and embedded predicates respectively. In contrast, the matrix predicate bears no thematic relation with respect to the raised subject in Raising contexts, which presumably moves to the matrix clause only for Case checking purposes.

Some theoreticians (notably Hornstein 1999), have considered that, if Theta Roles are Features, and thus not configurational (contra Hale & Keyser 1993), and given Minimalist postulates of theoretical simplicity, Control should be subsumed under Raising. The embedded subject, after relating to the theta role of the embedded predicate and in the absence of a Case assigner, raises to the matrix clause. The strict coreferentiality between arguments in EC would automatically follow from this proposal with no need to resort to other more complex mechanisms.

Raising and EC will be extensively discussed in Chapter 3. However, consider one interesting fact attested in several languages: EC and Raising take place in apparently identical contexts. This fact has led some theoreticians to conclude that Control should be subsumed under Raising (Roussou 2001).

The contrast between (71-73) shows that, in Romanian, Raising only takes place in the absence of the lexical Complementizer *Ca*. Interestingly, EC predicates prohibit Complementizers in embedded subjunctive complements too (74), which suggest that Raising and EC constructions employ the same syntactic configuration:

(71) Sa nimerit ca toți băietii să fie bolnavi. **Romanian**
 It has happened Comp all boys the Subj. be sick
 'It has happened that all the boys are sick.'
 [Roussou 2001]

(72) Toți băietii sau nimerit să fie bolnavi. **Romanian**
 All boys the refl-have happened Subj. be sick
 'All the boys happened to be sick.'
 [Roussou 2001]

(73) *Toți băietii sau nimerit că să fie bolnavi. **Romanian**
 All boys the refl-have happened Comp Subj. be sick
 'All the boys happened to be sick.'
 [Roussou 2001]

(74) Mioara_i a început (*ca) să se_i pregătească **Romanian**
 Mioara has started Comp Subj. Refl. prepare-3sg
 de plecare.
 of departure
 'Miora has started to prepare the departure.'
 [Alboiu & Motapanyane 2000]

The same pattern is found in European Portuguese,
 where both Raising and EC predicates are restricted to Non-
 inflected Infinitival complements (75-77).

(75) *As crianças parecem [falarem portugues]. **Portuguese**
 the children seem-3sg speak-3sg Portuguese
 'The children seem to speak Portuguese.'

(76) Eles evitaram sair. **Portuguese**
 they avoided-3pl go-out-INF
 'The avoided to go out.'
 [Acrisio Pires, p.c.]

(77) *Eles evitaram sairem. **Portuguese**
 they avoided-3pl go-out-3pl
 'They avoided going out.'
 [Acrisio Pires, p.c.]

4 Conclusion

In this chapter, I have presented a brief typology of Control. Apart from the uncontroversial NOC, and the type of Control that requires strict coreference of PRO with an antecedent (i.e., EC), I acknowledge the existence of certain types of predicates that, unlike traditional OC predicates, induce no strict coreferentiality between the relevant arguments. Landau calls the latter predicates PC predicates, in the sense that the reference of PRO must include the controller plus, optionally, some salient entity in the discourse. I have shown that, in many languages, the very same class of predicates that Landau calls PC predicates induce no PC in his sense, but may instead license subjects that are free in reference. Whether PC involves Control at all or not, the distinction between the EC and PC class is real in various respects: first, whereas EC predicates invariably induce strict coreferentiality with the controller, PC predicates allow for looser coreferential possibilities in the embedded subject. Second, this distinct behavior is not only attested in subject control but carries over to object control. Finally, some languages with rich overt morphology show that EC and PC predicates take complements that are syntactically visibly distinct.

In view of the fact that PC predicates do not involve control in the traditional sense (i.e., strict coreferentiality), and acknowledging the fact that languages do not display the same behavior within the PC class, I will leave PC aside in the inquiry into a correct analysis of control⁶. The reason for this is that if PC were part of the phenomenon to be studied within control, we would have to discard the Movement Theory of Control (Hornstein 1999) as correct. However, in view of the possibility that PC may not involve control, it is fair to consider only EC predicates in the study of control in the later chapters.

Interestingly, EC and Raising seem to arise in apparently identical syntactic configurations, which invokes the question of whether the mechanics of EC and Raising should be distinguished at all. The next Chapter will deal with this issue in detail.

⁶ This, however, does not mean that PC is not part of the phenomenon to be studied within control. For example, as Landau (1999) suggests, the PC phenomenon as he attests for English fulfills all the criteria of OC as summarized in (16) in section 1 of this chapter. Moreover, the existence of PC would invalidate an analysis of control in terms of Movement (Hornstein 1999), since this analysis would invariably predict strict coreferentiality between the relevant arguments, and hence, the inexistence of the PC phenomenon.

CHAPTER 3: EXHAUSTIVE CONTROL VERSUS RAISING

This chapter reviews the mainstream theories of Control that have been proposed, namely the Movement theory of Control (O'Neil 1995; Hornstein 1999 & 2001) and the Case-Theory of Control¹ (Chomsky and Lasnik 1993; Martin 1993, 1996; Bošković 1995, 1997). After suggesting that none is empirically and/or theoretically adequate, I suggest that the persistent idea that Control and Raising are distinct is, in the end, correct. Specifically, I provide evidence that the understood subject in complements to EC predicates receives regular Structural Case (rather than Null Case as proposed by the Case-Theory approach). This supports the following ideas: (i) that Control cannot be subsumed under Raising and (ii) that Case does not explain the complementary distribution between PRO and lexical subjects.

1 Some History

¹ A theory of Control must account for both, the distribution and the interpretation of PRO. Chomsky and Lasnik's (1993) proposal only accounts for the distribution of PRO, and hence, it does not constitute a theory of Control. However, Martin (1996) adopts the distributional account in Chomsky and Lasnik (1993) and further includes a proposal for the interpretation of PRO. Thus, when I refer to the Null Case-Theoretic approach I refer to the conjunction of both Chomsky and Lasnik (1993) and Martin (1996).

Control has been distinguished from Raising since the early days of Generative Grammar (Rosenbaum 1967). The immediate distinction is that, in Raising contexts, the surface subject bears no direct relation to the matrix predicate and is instead related to the embedded verb. This is shown by the fact that an expletive *it* with no semantic content can equally occupy the subject position of the matrix clause (2). Moreover, unlike Control predicates, Raising predicates impose no selectional restrictions on their subject. (3) shows that predicate *try*, for instance, requires that its subject be animate.

(1) John seems to be sick.

(2) It seems that John is sick.

(3) *The book tried to reach all the readers.

This distinction has been captured by arguing that Raising to Subject only takes place in Raising and not in Control. On the other hand, the question of how the controlled subject of the embedded clause should be represented has varied through different proposals. Rosenbaum (1967) suggests that, by a rule (equi-NP deletion), the controlled copy is deleted. Thus, (5) would derive from a representation like (4).

(4) John tried [John to eat the cake].

(5) John tried [Ø to eat the cake].

Subsequent proposals have dispensed with Rosenbaum's, and have instead suggested that the understood element is a formative that is phonetically empty. This alternative was already present in Postal (1970), who suggested the possibility of having a pronoun *Doom*, which would accidentally have null phonological shape. Pronoun *Doom* became PRO in Chomsky (1973). Since the advent of PRO, a sentence like (5) is standardly represented as (6) below. In addition, Control is distinguished from Raising (7), which is considered as an instance of NP-movement leaving a trace behind.

(6) John_i tried [PRO_i to eat the cake].

(7) John_i seems [t_i to be sick].

Within the Government and Binding framework (Chomsky 1981), the motivation for postulating PRO comes from the Theta Criterion (the requirement that each argument bears one and only one theta role and each theta role is assigned to one and only one argument). The distribution of PRO is accounted for by Binding Theory. Considering the inventory of empty categories and their licensing conditions, Chomsky concludes that PRO fills the last available option in the chart below. PRO has both Anaphoric and Pronominal features and hence must satisfy both Condition A and B of the Binding Theory summarized in (9).

(8)

[+Anaphor, -Pronominal]	NP-trace	Prin. A
[-Anaphor, +Pronominal]	Pro	Prin. B
[-Anaphor, -Pronominal]	Wh-trace	Prin. C
[+Anaphor, +Pronominal]	PRO	Prin. A & B

(9) Binding Theory.

Condition A.

Anaphors must be bound in their Governing Category.

Condition B.

Pronouns must be free in their Governing Category.

Condition C.

R-Expressions must be free.

Governing Category: the Governing Category of α is the least category which dominates α , a governor of α and a SUBJECT accessible to α .

(Chomsky 1981)

Since PRO is both Anaphoric and Pronominal, it is subject to contradictory binding requirements. Chomsky concludes that the only way that PRO can satisfy both Condition A and B is by not having a Governing Category, which amounts to saying that PRO is ungoverned. This is the PRO-Theorem.

(10) PRO-Theorem: PRO must be ungoverned.

Crucially, in this framework, PRO is only licensed in infinitival clauses of the CP type. Were the complement of the IP type, the matrix predicate would govern the embedded subject. In fact, this is the crucial difference between ECM and Control. Control involves a CP complement, whereas

ECM involves an IP complement, so that in the latter, the matrix predicate may govern the NP in the embedded subject position.

(11) John tried [_{CP} [_{IP} PRO to eat the cake]].

(12) John believes [_{IP} Mary to be the smartest student].

In GB, Raising is understood as being a product of NP-movement of the embedded subject to the matrix clause. Since the matrix predicate assigns no Theta role to its subject, movement from the embedded clause to the matrix clause is licensed without violating the Theta Criterion. The suggestions of how raising takes place have varied little since its initial proposal. More recently, since the advent of the operation Agree (Chomsky 1998), Raising and Movement in general is justified by the presence of EPP features on functional heads. Thus, Raising is invoked by a strong EPP feature on matrix T².

2 Movement Theory vs. Case Theory of Control

This section reviews the two main syntactic explanations that have been provided for accounting for the Distribution and Interpretation of PRO within the

² See Martin (1999) for a tentative reduction of EPP to other properties of the Grammar. See also Epstein and Seely (1999), Castillo, Drury and Grohmann (1999), and Boeckx (2002) for proposals eliminating the EPP.

Minimalist Program. I will discuss the Case-Theoretic account (Chomsky and Lasnik 1993; Martin 1993 & 1996; Bošković 1995 & 1997) and the Movement analysis of Control (O'Neil 1995; Hornstein 1999 & 2001). My presentation includes a summary of each theory as well as a revision of the main differences that will be relevant for a proper inquiry of the phenomenon.

2.1 The Case-Theoretic Approach

Within the Minimalist Program, the Chomskyan tradition has persisted on the existence of PRO as the formative that represents the phonetically null subject of the embedded clause in Control infinitivals. Chomsky and Lasnik (1993) suggest that PRO bears a special type of structural Case, Null Case, which is licensed by T only in certain Non-Finite contexts. This approach overcomes several problems of the GB approach to Control. First, the parallel behavior of NP and PRO is captured in an elegant way. Specifically, in GB, PRO is the only element apart from clauses that does not conform to the Visibility Condition (i.e., the requirement that arguments needs to be visible through Case for theta marking), since PRO receives a theta role but no Case. Second, there is evidence that PRO, like other nominals, refuses further movement after its Case has been

checked. Specifically, Chomsky and Lasnik (1993) argue that the reason for the ungrammaticality of (13-14) is that NP-movement has taken place from a Case position. In a parallel fashion, (15-16) show that PRO obeys the same restrictions for movement as regular nominals do. In other words, PRO has moved from a Case position, a possibility banned by Last Resort. (17-18) further show that the position where PRO moves to is a position where PRO is usually licensed.

(13) *I prefer for him to seem to t that he is clever.

(14) *I prefer for him to strike t that he is clever.

(15) *He prefers [PRO to strike t [that he is clever]].

(16) *He prefers [PRO to seem to t [that he is clever]].

(17) He prefers PRO to strike John as t clever.

(18) He prefers PRO to seem to John t to be clever.

The above facts indicate that the point where the embedded subject gets Case is not the matrix clause, as the movement approach to Control would suggest. The freezing fact together with the Visibility Condition on LF Theta marking constitutes the strongest argument for Null Case.

Raising T is different from Control T. Unlike the latter, T in Raising is more 'defective' in being unable to assign Case to its subject. The subject moves to the matrix clause for Case checking purposes. Chomsky still assumes

the Theta Criterion, which demands that A-chains contain no more than one theta position. This amounts to saying that movement from theta to theta position is prohibited, since it would result in an illegitimate Chain with multiple theta positions. This idea is in accordance with the proposal in Hale & Keyser (1993) that Theta roles are configurational and speaks against the possibility that Theta Roles be considered Features (Bošković 1994; Lasnik 1995; Bošković and Takahashi 1998, Hornstein 1999, 2001).

Chomsky, following the GB tradition, assumes that the categories of the complement in Control and Raising/ECM are distinct even though both are infinitival in English. Specifically, whereas Control predicates take CPs, Raising/ECM predicates take TP complements. The motivation for such a distinction comes from the notion Phase. The categorical nature of the embedded clause in control will become relevant in section 3 of this chapter. For this reason, let us next consider in some detail the argument that Chomsky proposes for considering the complement clause in Raising and Control as distinct.

Chomsky addresses the general question of why Movement (Raising) is ever possible if Agree and Merge preempt it. The preliminary answer is that Pure Merge of Arguments is restricted to Theta Positions. From this, it follows that

non-Theta positions must be visited only by elements that Move to that position, not by Merge. The problem arises with Expletives, which do not have Theta requirements and in principle can Merge in non-Theta positions. The question is why Merge of the Expletive does not invariably ban Movement of arguments. This reasoning also applies to the competition between Expletives and PRO. For a sentence like (19), the application of MoM results in ungrammaticality, as shown by (20).

(19) It's fun [PRO_i to t_i go to the beach].

(20) *is fun [it to PRO go to the beach].

Chomsky suggests an interesting solution to the problem through a novel notion *Subnumeration* (see chapter 1, section 2.3), defined as subsets of LA that are placed in active memory. The elements in the Subnumeration will determine whether Merge over Move (MoM) should apply, and only the presence of an Expletive in the Subnumeration will preempt Move. Contrary to (20), the grammaticality of (19) suggests that the Subnumeration contains no Expletive and that no MoM violation occurs. The conclusion is that only in the presence of an expletive in the Subnumeration do MoM considerations apply. In turn, Chomsky further argues that Subnumerations should build natural Syntactic Objects (SO), 'an element that is relatively free in terms of Interface

properties' (Chomsky 1999). He suggests that this notion corresponds to Propositions on the Semantic side (vP and CP-the latter including information about Tense and Force). Propositions have the characteristics of allowing for relative freedom with respect to certain PF effects such as fronting, extraposition, pseudoclefting and response fragments. Incidentally, such operations are typically attributed to CPs. He concludes that CPs are Propositional. Finally, he calls these natural Propositional Syntactic Objects 'Phases'.

Turning back to (19), the absence of violation of MoM suggests that the embedded clause must be a Phase. Some evidence for the Propositional status of embedded complements at the PF side of Control is suggested in Rizzi (1982), translated into English in (21-22) below.

(21) [only to drink beer] does he ultimately want!

(22) [to talk to Mary] is what John wants.

[Chomsky 1999]

Complements to Raising/ECM predicates are not Phases. (23-24) demonstrate that the same PF effects as in (21-22) produce an ungrammatical result.

(23) *[only to drink beer] does he ultimately seem!

(24) *[to like beer] is what John seems!

[Chomsky 1999]

To summarize, Control predicates select for CP Phases³. As in Raising constructions, the null subject receives a theta role from the embedded predicate, but crucially Control T assigns Null Case to PRO. Raising predicates select for TP complements. T, being defective, is unable to assign any Case to the embedded subject.

Martin (1996) provides some justification for the idea that Raising and Control T are distinct, and that only the latter has the ability to assign Case to PRO. Specifically, only [+Tense] nonfinite T can check Null Case. He bases his argument on Stowell's (1982) proposal that, unlike ECM complements, Control complements are tensed. They specify an unrealized time with respect to the Tense of the matrix clause. In contrast, complements to ECM predicates contain a Tense whose interpretation depends entirely on the Tense of the matrix clause. Martin relates the possibility of having independent tense in Control complements to the availability of eventive predicates. According to Enç, (1991) eventive predicates contain a temporal argument that need to be bound (by Tense, aspectual auxiliaries *have/be* and adverbs of quantification). The contrast between (25-

³ Importantly, notice that the type of predicate employed in (21-22) to show that the embedded complement in Control is a CP is crucially of the PC class. In section 3.2 I will show that the same contrast between Raising and EC complements does not hold.

26) shows that, under a non-habitual reading, eventive predicates are only licensed with Control predicates:

(25) John tried [PRO to bring the beer].

(26) *John believed Peter to bring the beer.
[Bošković 1995]

Martin concludes that, unlike in ECM infinitivals, complements to Control predicates contain a Tense that serves as binder of the temporal argument of the eventive predicate.

The following briefly presents the way Martin derives the coreferentiality effect in Control. He argues that PRO is a clitic similar to the SE clitic in Romance languages. PRO undergoes clitic climbing to the matrix T at LF. This movement is motivated by phi-feature checking purposes. In other words, parallel to SE, PRO does not check any features other than Case in the embedded clause, because it lacks Person and Number features. After climbing at LF, PRO is still not marked with phi-features, but instead of provoking a crash at LF, the two relevant chains (the chain created by PRO and the one of the controller) collapse into one super-chain, because the feature bags of PRO and that of the controller are non-distinct.

Bošković (1995), along with Martin's Null Case approach to the distribution of PRO as involving Tensed T,

suggests that Case Theory alone suffices to account for the facts in Raising and Control, and that the selection of the category of the embedded clause is an unnecessary notion. In other words, there is no need to postulate that Control and Raising/ECM predicates take CP and IPs respectively. In fact, he suggests that all infinitival complements that are not introduced by overt Complementizers be considered IPs. Section 3 below explores the relevance of categorial selection in different types of embeddings.

To summarize, the Case-theoretic approach of control proposes that the mechanics of control and Raising/ECM are distinct. Unlike the latter, the embedded T in Control assigns Null Case to its subject PRO.

2.2 The Movement Theory of Control

The lack of definite evidence that Raising should be distinguished from Control has led some researchers to reduce Control to Raising.

O'Neil (1995) and Hornstein (1999, 2001) accommodate Control to Raising mainly based on conceptual reasons. Hornstein argues that the only theoretical distinction between Raising and Control, i.e., the Theta Criterion, is a Deep Structure vestige that should be reformulated into Minimalist terms. This is achieved by assuming that Theta

roles are Features, and by allowing movement from Theta to Theta position. Hence, the only difference between Raising and Control is that the former involves movement from a Theta to a non-Theta position and the latter from a Theta to a Theta position. The motivation for Movement is for traditional Case checking purposes. Only matrix T is able to assign Case to the raised DP. The two relevant departures of this Theory from the Null Case approach to the Control are (i) that embedded T is unable to assign Case to the embedded subject, i.e. there is no freezing of the subject in the embedded clause, and (ii) the Theta Criterion does not hold.

The conceptual reasons suggesting that Control should be subsumed under a Movement analysis are plausible. In fact, the evidence for assuming Chomsky's idea that Null Case is checked in the embedded clause of Control predicates is somewhat obscure. The null phonetic nature of the understood subject forces a postulation of a special type of Case (Null Case) that is only checked by PRO. In fact, it is primarily the Visibility Condition and the Theta Criterion that force the postulation of Null Case.

Internal to the proposal of Control as Movement, there is the intuition that, in configurations that allow Movement, this operation is preferred to the postulation of

the formative PRO. Both OC and Raising configurations allow Movement. Since Movement is a recurrent and a natural property in natural languages, Hornstein claims that Minimalist considerations suggest reducing Construal to the already existing property, i.e. Movement, equating thus Control to Raising.

Some advantages of this proposal include the fact that the Null Phonetic Nature of the understood subject is derived by the general mechanism that deletes lower copies, and that the Control effect (strict coindexation) arises without further complication of the theory, e.g. without invoking an additional mechanism that collapses chains for explaining the Control effect as in Martin (1996).

This attractive reductionist proposal that maximally exploits an existing mechanism in the grammar has far reaching consequences for the general picture of the way the Computational System operates. Minimalism is a Program and proposals suggesting novel mechanisms are welcome as long as they conform to Minimalist postulates. The Movement approach to Control suggests that Movement is not a costly operation, i.e., Movement applies wherever possible. This contrasts sharply with recent ideas that Movement is a costly operation induced not by Case, which can be checked by long distance Agree (Chomsky 1999), but by the EPP. On

the other hand, departure from the Theta Criterion that maintains the idea that Theta roles are configurational is another novel departure from the tradition. The question remains whether this departure from the tradition is empirically correct.

Similarly, Manzini and Roussou's (1998) alternative analysis dispenses with empty categories such as PRO and traces of A-movement. Parallel to the Movement approach to Control, the basic assumption is that Theta Roles are Features. DPs are directly Merged at Argument positions in which they check strong Inflectional features, and from these position they attract the relevant θ roles, as displaced Features. In the case of Raising, the matrix subject attracts the θ role of the embedded predicate. In Control, two θ roles are attracted. Crucially, contra Chomsky's proposal, Infinitival T does not project a D feature in Control, and no DP is merged in that position. This accounts for the null phonetic nature of the embedded subject. Additionally, only the presence of a lexical Complementizer licenses lexical DPs in embedded infinitival complements.

In short, the Movement analysis of Control analyzes Control as an instance of Movement that takes place from theta to theta position. Since the conceptual reasons for

suggesting that Control is Movement are in accordance with Minimalist terms, the correctness of the proposal will ultimately be determined by empirical facts.

2.3 A comparison

In this section, I comment on the two radically different theories of Control presented above, namely the Movement Theory of Control and the Null Case-Theoretic approach to Control. Several important consequences arise for each theory.

The first question is the theoretically distinct assumptions concerning whether Theta Roles are Features or not. The evidence for Theta Roles being configurational⁴ is somewhat vague, and in the absence of clear evidence, Hornstein opts for a maximally Minimalist proposal that subsumes Control under Movement, an independently necessary characteristic of natural languages. The consequence of assuming that Theta roles are Features changes the general picture proposed by Chomsky of how derivations proceed, and calls for a revision of other constructions that involve

⁴ The idea that Theta Roles are configurational was presented in Baker (1988) in the form of UTAH (Universal Theta Alignment Hypothesis) and then elaborated on in Hale and Keyser (1994). The idea is that the thematic configurations are identical in all languages, which presupposes a configurational organization of theta roles.

Theta Roles. It seems that further independent evidence suggesting the correctness of either theory of Control may provide support for either view of Theta Roles.

Second, the idea that complements to OC predicates, unlike NOC complements, are not Islands for Movement is only relevant if one assumes the Movement analysis of Control, where crucially Movement is viewed as a costless operation that must take place whenever possible. If movement is costly, as is standardly believed (see Chapter 1, section 2.3), the fact that complements to OC predicates are not islands does not provide evidence for the Movement analysis of Control. What ultimately needs determining is whether Movement is costless or, on the contrary, it only takes place where necessary.

Third, one advantage that the Movement approach provides is that it easily explains the strict coreferentiality between the Controller and the Controlee and its null phonetic nature in EC contexts. The Case-Theoretic account must derive this identity by assuming that two chains (that of the controller and that of PRO) collapse at some point in the derivation (Martin 1996). The hard question for the Case-Theoretic approach is why PRO, having structural Case, must consistently be phonetically null. The postulation of Null Case and its inclusion within

Structural Cases makes Null Case an odd type of Case in the inventory of Cases⁵.

Fourth, the two proposals differ on where they take the Freezing Effect for the embedded subject to take place. In the Movement approach, embedded T is unable to assign Case and the Freezing Effect arises in the matrix clause. The Case Theory of Control, on the other hand, assumes that embedded T assigns Case and freezes PRO within the embedded clause.

Fifth, and related to the previous idea, the two approaches differ in the assumption of whether Raising/ECM and Control complements are distinct in terms of the defectiveness of the embedded clause. The Movement approach recognizes no difference between Raising and Control in this respect. The Case-Theoretic approach does, by postulating that Control T, apart from having the familiar EPP feature, contains a Case that will be checked by PRO. Chomsky (1999) further justifies the completeness of Control complements through the notion Propositionality/Phase. Control complements being CPs must be Phases; Raising/ECM predicates take TP complements and, hence, are not Phases. Although the relevant intuition is

⁵ Uriagereka (p.c.) suggests that this depends on whether Null Case can be generalized and appears in other positions other than the standard one.

clear, the notion itself receives no clear definition (see section 2.1). This casts serious doubts about its relevance for syntactic derivations, and contrasts with notions such as Island/Cascade (Uriagereka 1999), whose existence is derived through the LCA. Second, the idea that Control predicates invariably take CP complements will be challenged in section 3, where I will argue that at least EC predicates take TPs and not CPs as Chomsky suggests. If so, complements to EC predicates are not Phases and no distinction should be made between EC and Raising in this particular respect.

Under Martin or Bošković's proposals, the categorial status of Control complements is not crucial. It is the existence of [+Tense] T in the embedded clause that forces Null Case checking of PRO. Assuming that Control predicates take TPs as the next section argues, the relevant question then is whether there is any compelling evidence for the central distinction between the Movement and Case-Theoretic approaches: the Case checking and consequent freezing of the subject in the embedded clause.

3 Selection

This section discusses the much-debated question of whether categorial selection of predicates is a necessary

and independent mechanism that explains syntactic effects in embedded complement clauses in Raising and Control.

Recall that Chomsky's position is that Control predicates select for CPs, while Raising predicates select TP_s. Bošković (1995), on the contrary, suggests that economy considerations suggests that complements of Control predicates have the TP_s status. In turn, he suggests that c-selection follows from semantic selection of [+/-Tense] complements by matrix predicates, and that c-selection should be discarded as an independent mechanism in the grammar.

I will argue that EC and Raising select for TP_s. This suggests that, contra Chomsky, complements of EC predicates are not Phases, and it raises the question whether Control and Raising should be distinguished.

3.1 From GB to the MP

Grimshaw (1979) suggests that lexical entries of predicates contain information about the selection for both syntactic categories (c-selection) and the semantic type of complement that they select for (s-selection). The idea is that information about c and s-selection are independent and that c-selection involves a distinct syntactic mechanism of the grammar. This is shown by the pattern in

(27-30), where there is no one-to-one correlation between both types of selection. Verbs that take the same semantic type may or may not select identical syntactic categories. For example, both *wonder* and *ask* s-select for questions, but only *ask* may select an NP.

(27) John wondered [_{CP} what the time was].

(28) *John wondered [_{NP} the time].

(29) John asked [_{CP} what the time was].

(30) John asked [_{NP} the time].
[Grimshaw 1979]

Pesetsky (1982b, 1992) argues against the idea that c-selection constitutes an independent mechanism. He suggests that c-selection can be predicted by the ability of the predicate to assign Case to its complement. Thus, predicate *ask*, unlike *wonder*, is marked [+accusative] and consequently may select for an NP complement.

C-selection, independently from s-selection, has played a crucial role in predicting certain syntactic effects in embedded complements in GB. For example, the traditional explanation of the paradigm from Bošković (1995) repeated in (31-34) is that predicate *be illegal* c-selects for CP, a barrier for movement/Raising (31) and for Government of PRO (32). Conversely, predicate *appear* c-selects for IP, licensing movement/Raising to the matrix

clause (33) but disallowing PRO, because the embedded subject is a Governed position (34). These instances indicate that c-selection was able to predict the complementary distribution of Raising vs. Control in GB.

(31) *John_i is illegal [_{CP} t_i to park here].

(32) It is illegal [_{CP} PRO to park here].

(33) John_i appears [_{IP} t_i to like Mary].

(34) *It appears to Bill [_{IP} PRO to like Mary].
[Bošković 1995]

C-selection of ECM predicates as selecting for IPs vs. Control predicates as selecting for CPs also predicted that ECM and control are in complementary distribution. The matrix predicate could only govern the embedded predicate across an IP complement in ECM, as the pattern in (35-38) shows.

(35) John believed [_{IP} him to be crazy].

(36) *John_i believed [_{IP} PRO_i to be crazy].

(37) John tried [_{CP} PRO to win].

(38) *John tried [_{CP} him to win].

As Bošković argues, the c-selection mechanism in GB is stipulative. CPs or IPs are selected in order to accommodate the PRO-Theorem (i.e., PRO must be ungoverned) and the idea that Barriers prohibit raising an argument to the matrix clause.

The transition from GB to Minimalism provides some light to the otherwise stipulative character of the GB proposal for the distribution of PRO and Raising. In particular, Bošković (1995) argues against the GB approach, which uses the two notions Government and c-selection. He suggests that s-selection is the crucial factor that explains the complementary distribution between Control and Raising. Following Martin (1996), he suggests that Control predicates select for [+ Tense] complements, and hence, license PRO with Null Case, freezing PRO in place. Raising and ECM predicates s-select for [-Tense] complements and consequently, license Raising and disallow PRO. What follows are some of the advantages of this proposal.

First, we dispense with what from the Minimalist spirit is considered the complex and unnecessary notion Government. Second, the proposal discards c-selection as an independent stipulative mechanism and derives it from the s-selection properties of predicates. Third, the idea reduces the prohibition of NP-movement for Case checking purposes from the notion Barrier to a more basic requirement based on economy considerations, namely Last Resort. Last Resort accounts for the Freezing Effect, the idea that NP-movement from a Case position is prohibited. Thus, contexts containing embedded [+Tense] T will prohibit

further raising of the embedded subject. This is exemplified in (39):

(39) *John_i was tried [t_i to leave].

Notice that the impossibility of ECM with predicate *try* as in (40) is not related to the fact that *try* does not assign Accusative Case, as (41) below shows. Therefore, it must be the case that embedded T assigns (Null) Case to PRO, and consequently, freezes it in place.

(40) *John tried [him to leave].

(41) John tried something.

The reverse also holds. Control with ECM/Raising predicates is prohibited on independent grounds: PRO cannot be licensed internal to a [-Tense] clause.

(42) *John_i seems [PRO_i to leave].

(43) *John believes Mary_i [PRO_i to leave].

(44) *John believes [_{CP} PRO to be smart].

The above facts from Bošković show that reference to c-selection is unnecessary and that independent mechanisms explain the complementary distribution between Control and Raising/ECM. Contra Chomsky (1999), Bošković argues that there is no necessity to argue that Control predicates take CP type complements, and that economy considerations suggest that control predicates take IP complements.

3.2 Raising and EC take TP complements

In this section, I argue that at least certain Control predicates select for TP complements⁶. I will show that EC predicates are of this sort. In fact, it seems that EC and Raising arise in essentially identical syntactic configurations as discussed in chapter 2, section 3.

The new typology of Control discussed in chapter 2 becomes relevant at this point. The distinction between EC and PC predicates calls for a revision of the arguments used to claim that Control predicates take CPs. In particular, we should check whether those arguments apply equally to EC as well as to PC predicates.

Recall from the previous section that Chomsky's reason to believe that Control predicates take CP complements is that they are Propositional and hence introduce Phases. The empirical justification for the, in this context, vague term Propositional comes primarily from certain constructions that typically involve CPs. Consider the evidence once more. The contrast between (45-46) and (47-48) shows that predicate *want* contrasts with Raising *seem* in allowing constructions typically attributed to CPs.

⁶ Within the GB framework, and in order to avoid a violation of the PRO-Theorem, Kayne (1981c) suggests that French DE and Italian DI, which appear introducing complements of control predicates are Complementizers.

(45) [PRO to go to the beach] is what John wants/decided.

(46) [Only to drink beer] is what John wants.

(47) *[only to drink beer] does he ultimately seem.

(48) *[to like beer] is what John seems.

[Chomsky 1999]

However, notice that predicate *want* in (45-46) is of the PC type. (49-50) demonstrate that the contrast considerably weakens with EC predicates such as aspectual and implicatives. This leads us to the conclusion that the argument in Chomsky that control predicates take CP complements is not correct for the predicates in the EC class, precisely the type of predicates that are the object of study in this thesis.

(49) [PRO to go to the beach] is what John
*started/*managed/?tried.

(50) [Only to drink beer] is what John
*started/*managed/?tried!

The asymmetry in fronting possibilities between EC and PC is also attested in other languages⁷. The following examples in (51-52) illustrate that such is the case in Greek as Alexiadou & Anagnostopoulou (1999) note.

Specifically, unlike the EC predicate *start* in (52), the PC

⁷ Predicate *try* does not behave uniformly across languages. Unlike in English, Spanish *try* allows for optional control, an indication of PC. As expected, extraposition results in grammaticality (ii).

(i) Juan_i intentó que pro_j comiera.

(ii) [Sólo beber cerveza] es lo que Juan intentó en el bar.

predicate *know* allows to prepose the complement clause, as (51) demonstrates.

(51) *afto pu kseri o Janis ine na kolimba.* **Greek**
this that knows John-NOM is Subj.swim-3sg
'What John knows is how to swim.'

(52) **afto pu arxise o Janis ine na trehi.* **Greek**
this that started-3sg John-NOM is Subj. run-3sg
'What John started is to run.'
[Alexiadou & Anagnostopoulou 1999]

In short, although the contrast between PC and Raising predicates clearly holds, the contrast does not carry over to EC predicates and it does not seem correct to conclude that EC predicates take CPs.

Crucially, there is evidence supporting the idea that both Raising and EC predicates take TP complements. The first type of evidence below comes from Balkan Raising and EC constructions. As noted in the literature (Grosu & Horvath 1984, Roussou 2001), in Romanian, Raising out of Subjunctive complements is allowed as long as there is no Complementizer, as shown by the contrast in (54-55).

(53) *Sa nimerit ca toti baietii sa fie bolnavi.* **Romanian**
It has happened Comp all boys the Subj. be sick
'It has happened that all the boys are sick.'

(54) *Toți baietii sau nimerit să fie bolnavi.* **Romanian**
All boys the refl-have happened Subj. be sick
'All the boys happened to be sick.'

(55) **Toți baietii sau nimerit că să fie bolnavi.* **Romanian**
All boys the refl-have happened Comp Subj. be sick
'All the boys happened to be sick.'
[Roussou 2001]

Crucially, just as raising predicates do, EC predicates prohibit Complementizers in embedded subjunctive complements. This is shown in (56) below, and suggests that where EC and Raising hold, the matrix predicate takes TP as its complement.

- (56) Mioara_i a început (*ca) să se_i pregătească **Romanian**
 Mioara has started Comp Subj. Refl. prepare-3sg
 de plecare.
 of departure
 'Miora has started to prepare the departure.'
 [Alboiu & Motapanyane 2000]

Standard and Belfast English also provide evidence in favor of the idea that Raising and EC predicates take TPs. One well-known distinction between Standard English and Belfast English is the categorial status of the element *for*. In Standard English, *to* is the Infinitival marker (57) and *for* in (58) is unambiguously a prepositional Complementizer that only appears when there is a lexical subject in the embedded clause.

(57) John seems to be sick.

(58) John prefers for Mary to leave.

However, in Belfast English, *for* is ambiguous between an Infinitival marker and a Complementizer (Henry 1987, 1992). Crucially, Henry argues that, in constructions that display the sequence *for-to*, *for* is not located in Comp but rather it is cliticized to *to* in the Inflectional cluster.

Among such constructions, we find both raising (59-60) and EC (61).

(59) John seems [for to be better]. **Belfast English**

(60) John isn't likely [for to win]. **Belfast English**

(61) They tried [for to win]. **Belfast English**

In fact, the element *for* only functions as a Complementizer where there is a lexical subject in the embedded clause, as in (63). (63) contrasts minimally with standard ECM in (62), where *for* is part of the Infinitival cluster only in the latter.

(62) I wanted John for to win. **Belfast Engl.**

(63) I wanted sincerely [for John to win]. **Belfast Engl.**

In short, the contrast between Standard English and Belfast English shows that there is a consistency in the system, whereby Raising/ECM and EC employ the same syntactic configuration that crucially involves no C.

Scandinavian languages further support the claim that EC and Raising involve bare TPs. In Icelandic, it is assumed that infinitival marker *að* never appears in ECM (65) or Raising (64) (Beukema and den Dikken 1989). In view of the fact that *að* appears both in Control and Finite contexts licensing lexical subjects, the question is whether *að* is in Comp or not in Control. Thráinsson (1993) suggests that, contrary to what we find in Finite contexts

licensing lexical subjects, *að* is not placed in Comp in Control (see evidence in Chapter 4, section 1.2.2.6). From this, he concludes that Control predicates do not take CP complements⁸. Similarly, Norwegian particle *å* is not a Complementizer but part of INFL, and it consistently appears in both ECM/Raising and EC.

- (64) *María virðist aldrei hafa lesið bókina.* ***Icelandic***
 Mary seems never to-have read the-book
 'Mary seems never to have read the book.'
- (65) *Ég taldi Maríu aldrei hafa lesið bókina.* ***Icelandic***
 I believe Mary-Acc never to-have read the-book
 'I believe Mary never to have read the book.'
[Thráinsson 1993]
- (66) *Jag anser meg *(a) ha rett.* ***Norwegian***
 I think me have right
 'I think myself to be right.'
[Platzack 1986]

In Bošković (1995), within the GB framework, we find further evidence for the idea that Control predicates take TP complements. Assuming Stowell's (1982) idea that the distribution of empty Complementizers is governed by the ECP, the contrast between (67-68) vs. (69-70) cannot be accounted for. (67-68) show that ECP is satisfied only when the empty Complementizer is governed by the matrix predicate. Unexpectedly, although the empty C is not

⁸ For a different view on *að*, see Platzack (1986), where he considers it to be a Complementizer.

governed in (69-70) the sentence is fine. Bošković concludes that predicate *try* does not take a CP complement.

(67) It is believed [_C[he is crazy]].

(68) *What the terrorists believe is they will hijack an airplane.

(69) I tried at that time [_C[PRO to fail her]].

(70) What the terrorists tried was [PRO to hijack an airplane].

Another evidence in Bošković that suggests that control predicates take TP complements involves Scrambling out of Infinitives in Serbo-Croatian. Bošković adopts the proposal in Mahajan (1990) and Nemoto (1991) that Scrambling out of Finite vs. Infinitival contexts involve A' and A-movement respectively. Since A-movement across a CP boundary is standardly prohibited, the question for the standard assumption that Control takes CP complements is why A-movement in the Serbo-Croatian example (71) is possible. The conclusion is that Control predicate *plan* must take TP as its complement. Evidence that A and not A' movement takes place is proven by the lack of Weak Cross Over (WCO) effects, which is well known to appear only where A' movement is involved.

(71) Nekoga_i njegov_i otac planira PRO kazniti t_i **Serbo-Cr.**
 someone his father is-planning to-punish
 'Someone, his father is planning to punish.'
 [Bošković 1995]

In contrast, the finite complement of predicate *believe* has the CP status. Notice in (72) that there is no WCO effects and hence no A-movement. This is not surprising, since A-movement across a CP boundary is prohibited.

- (72) Nekoga_i njegov_{k/?*i} otac veruje da oni mrze t_i **Serbo-Cr.**
 someone his father believes that they hate
 'Someone, his father believes Comp they hate.'
 [Bošković 1995]

To summarize, in this section I have shown (i) that there are no reasons to believe that EC predicates take CP complements (ii) that there is evidence that they take TPs, and (iii) that EC and Raising apparently arise in identical syntactic configurations. If, contra Chomsky, EC involves no CP and Raising/ECM and EC employ the same syntactic configuration, the idea that Control is distinct from Raising is considerably weakened, at least in standard structural terms. The following section identifies the ingredient that distinguishes control from raising: the tense properties in the embedded clause.

4 Tense as the defining factor between EC and Raising

This section gathers evidence in favor of the idea that Control and Raising T differ in their content, which supports the view that Control and Raising might involve

distinct mechanisms as The Case-Theoretic approach to Control suggests. In turn, the more complete content of T in Control vs. Raising provides some grounding to the intuition persistent in Chomsky that Raising T is more defective than Control T. Evidence is mostly gathered from Martin (1996) and Bošković (1995).

It has been long noted that Tense independence correlates with Independence of the Domain that contains it. This is most clearly exemplified by Indicative complements, which impose no Tense restrictions and freely allow for distinct temporal Adverbials in the matrix and embedded clauses. Indicative complements such as (73) are free even from the well known *[-Past] [+Past] (consecutio temporum) restriction found in Subjunctive complements.

(73) John says that Mary left yesterday.

Raising and EC predicates do not differ in this respect. They invariably disallow distinct tenses, signaled by the prohibition of distinct temporal adverbials:

(74) *Yesterday John seemed to be sick tomorrow.

(75) *Yesterday John tried to leave tomorrow.

The impossibility of distinct temporal adverbials has led some to conclude that both Raising/ECM and Control are Tenseless, and attribute the lack of Nominative Case to the lack of independent Tense (Iatridou 1993). However, Stowell

(1982) suggests that ECM/Raising and Control complements differ in the Tense interpretation. Specifically, although no distinct temporal adverbials are allowed in Control, the event of the embedded clause is understood as unrealized with respect to the tense of the matrix clause (76), while the temporal interpretation of ECM is entirely defined by the tense of the matrix predicate. In (77-78) the time denoted by the Infinitival must coincide with the matrix event time. Stowell concludes that, unlike Control, ECM and Raising complements are Tenseless.

(76) John tried to bake a cake.

(77) John considers himself to be the best detective.

(78) John seems to like poker.

Following Stowell's suggestion, Martin (1996) proposes that the abstract Tense in Control complements is responsible for licensing PRO with Null Case. In contrast, Raising/ECM T being defective and tenseless forces the embedded subject to raise to the matrix clause.

Martin relates the idea in Stowell with an asymmetry that arises in eventive predicates in Control vs. ECM. Adopting Enç's (1991) idea that eventive predicates contain a temporal argument that needs to be bound, the asymmetry shown in (79-80) below shows that Control predicates allow for eventive predicates that denote a non-habitual reading.

In contrast, the temporal argument of the eventive predicate 'bring' remains unbound in complements to ECM and Raising predicates, where only the habitual reading is available. In the absence of any other binders, only state denoting predicates are possible in ECM (81):

(79) John tried to bring the beer.

(80) *John believed Peter to bring the beer.

(81) John believed Peter to be the best detective.

Martin argues that the binder of the temporal argument of the embedded predicate in Control is [+Tense] T in (79), and suggests that [+T] assigns Null Case to PRO. Martin's proposal provides some evidence for the otherwise stipulative idea in Chomsky and Lasnik (1993) that PRO gets Null Structural Case from Infinitival Tense only in Control.

One interesting piece of evidence for the [+T] nature of Control T comes from certain Romance Languages. Kayne (1981b) notes that, unlike English ECM predicates (83), certain Romance languages like Italian, French or Spanish do not have ECM constructions (84-85) and allow instead for Control in such contexts (86-87).

(82) John believes him to be intelligent.

(83) *John believes to be intelligent.

- (84) *Sostengo Gianni essere intelligente. **Italian**
 assert-1sg Gianni be-INF intelligent
 'I assert Gianni to be intelligent.'
 [Watanabe 1993, from Kayne 1981b]
- (85) *Juan cree Maria ser inteligente. **Spanish**
 Juan thinks Mary be-INF intelligent
 'Juan believes Mary to be intelligent.'
- (86) Je crois PRO avoir fait une erreur. **French**
 I believe to-have made a mistake
 (lit.) 'I believe to have made a mistake.'
 [Martin 1996]
- (87) Gianni crede di PRO essere intelligente. **Italian**
 Gianni believes di be-INF intelligent
 (lit.) 'Gianni believes to be intelligent.'
 [Martin 1996]

As expected, Lexical subjects are prohibited where Control is licensed, as illustrated in (88-90).

- (88) *Je crois Marie avoir fait une erreur. **French**
 I believe Mary to-have made a mistake
 'I believe Mary to have made a mistake.'
 [Martin 1996]
- (89) *Gianni crede di Paolo essere intelligente. **Italian**
 Gianni believes di Paolo be-INF intelligent
 'Gianni believes Paolo to be intelligent.'
 [Martin 1996]
- (90) *Gianni cree Maria ser inteligente. **Italian**
 Gianni believes Mary be-INF intelligent
 'Gianni believes Mary to be intelligent.'

The ungrammaticality of Lexical subjects where Control is allowed is expected if we attribute the characteristics of [+tense] to control T. However, as Watanabe (1993) points out, assuming that the semantics of Non-finite complements to propositional predicates like *believe* is

uniform across languages, the above asymmetry between English and the Romance languages is puzzling. Interestingly, Bošković (1995b) argues that this crosslinguistic difference correlates with the nature of Tense of the embedded complement. He shows that unlike in English, propositional infinitivals in Romance allow for event predicates without habitual readings even in the absence of aspectual or temporal modifiers (which would otherwise bind the event variable), as in (91-93). Martin concludes that the only possible binder of the embedded temporal argument is Tense.

- (91) Je crois rêver. **French**
 I believe dream-INF
 (lit.) 'I believe to dream.'
 [Martin 1996]
- (92) Maria creia llegar tarde ayer. **Spanish**
 Maria believed arrive-INF late yesterday
 (lit.) 'Mary believed to arrive late yesterday.'
 [Martin 1996]
- (93) Ana julgou chegar atrasada ontem. **Italian**
 Ana believed arrive-INF late yesterday
 (lit.) 'Ana believed to arrive late yesterday'
 [Martin 1996]

Another piece of evidence in favor of the idea that Tense asymmetries are relevant in distinguishing Control from Raising comes from Icelandic, where there is a difference between Raising/ECM and Control with respect to the tense in the embedded clause. Specifically, Raising in

Icelandic only takes place in Control complements skipping over negation (94-95), but not in Raising (96) or ECM environments, as noted by several authors (Holmberg (1986), Hornstein (1990a), Sigurðsson (1989) and Thráinsson (1986)). This suggests that T in ECM and Raising behaves uniformly and differently from Control T.

(94) *María vonaðist till [að hafa ekki lesið bókina].****Icelandic***
 Maria hoped for have not read the book
 [Watanabe 1993]

(95) **María vonaðist till [að ekki hafa lesið bókina].****Icelandic***
 Maria hoped for have read not the book
 [Watanabe 1993]

(96) **Skúli lofaði [lesa aldrei bókina].****Icelandic***
 Skúli seems read never the book
 [Watanabe 1993]

To conclude, the asymmetries found in Raising/ECM and Control with respect to Tense suggest that Control and Raising/ECM differ in their Tense specification, and that this distinction may be relevant to the extent that it distinguishes between Control and Raising as Martin (1996) has suggested.

5 Against Null Case. PRO checks regular Structural Case

The asymmetries between EC and Raising presented in the previous sections indicate that Control and Raising might be different in relevant respects, and that an

analysis that subsumes Control under Raising may not be correct.

In this section, I will present evidence from various languages in favor of the idea that the phonetically null subject in EC checks regular Case. This suggests that the Movement Analysis of Control is not correct, since movement from a Case position is arguably banned by Last Resort. On the other hand, it supports the intuition of the Case-Theoretic approach that Control involves a different mechanics from Raising. Thus, in the absence of empirical evidence suggesting the existence of Null Case, and in view of the fact that PRO checks regular Case, Null Case becomes conceptually undesirable.

5.1 Basque Case system

The Case marking system in Basque provides evidence that PRO checks regular Case. After analyzing the Case marking system in this language, I will conclude that PRO participates in the Case system as other nominals do, and hence, that PRO receives regular structural Case. The section is organized as follows. First, I will present a brief description of Basque and its Case system, and I will note that Dative Case only arises in the presence two DPs, one marked Absolutive and the other Ergative. Next, I will

present the Case Valuation system proposed in San Martin and Uriagereka (2002), which correctly captures the descriptive generalization stated above. Finally, data involving EC predicates suggest that PRO in Basque participates in the Structural Case marking system as other nominals do. From this, we need to conclude that PRO checks regular structural Case in Basque.

Basque is an Ergabsolutive language. Unlike Nominative-Accusative languages, subjects are marked with distinct Case markings depending on the type of predicate involved. Transitive predicates involve the Ergative-Absolutive pattern (Ergative on the Subject and Absolutive on the Object), and Intransitive predicates mark the single argument with Absolutive Case, the default Case marking. This asymmetry of Case marking on subjects is exemplified in (97-98), where (97) involves a transitive predicate, and (98) an unaccusative verb. (99) shows that Dative Case arises with ditransitive predicates⁹. Note that the Case marking on the arguments is reflected in the Auxiliary in Basque. In other words, the Auxiliary displays Case and person agreement with arguments that are marked with Case.

⁹ Dative Case may also accompany Absolutive arguments. However, San Martin (in progress) shows that the subject is not a regular subject in such instances, but rather a Quirky subject. See Fernández-Soriano (1999) for a parallel proposal for Spanish Unaccusative-Dative combinations.

(97) Jonek ogia erosi du. **Basque**
 John-ERG bread-Det-ABS buy Aux (3ABS-3ERG)
 'John has bought bread.'

(98) Jon bihar etorriko da. **Basque**
 John-ABS tomorrow come-Fut Aux (3ABS)
 'John will come tomorrow.'

(99) Jonek Mariari ogia eman dio. **Basque**
 John-ERG Mary-DAT bread-Det-ABS give Aux (3ABS-3DAT-3ERG)
 'John has given bread to Mary.'

The chart in (100) summarizes the pattern described above. Monoargumental sentences mark the single argument with ABS. Transitive predicates mark the object with ABS and the subject with ERG. Ditransitive predicates mark the object with ABS, the subject with ERG and the indirect object with DAT. (101) captures the generalization that DAT Case only arises in the presence of ABS and ERG.

(100)

	OBJECT	SUBJECT	IND. OBJECT
Unaccusative	—	ABS	—
Transitive	ABS	ERG	—
Ditransitive	ABS	ERG	DAT

(101) DAT only iff ABS and ERG.

Laka (1993a) and San Martin & Uriagereka (2002) propose Case systems that predict the generalization in (100-101). Let us concentrate on the later proposal.

San Martin & Uriagereka (2002) present a Case valuation system that derives the pattern in (97-99). They

suggest that it is necessary to propose a system that is not sensitive to the unaccusative, transitive or ditransitive nature of predicates itself, but rather to the number of DP arguments that are involved. That DPs and not arguments participate in the Case system in Basque is necessary in view of the fact that certain clauses are Case marked in Basque. Consider the paradigm of infinitival complementation below:

- (102) Jon [GAP ogia egiten] saiatu da. **Basque**
 Jon-ABS bread-Det-ABS make-Nomin-INN try Aux (3ABS)
 'Jon has tried to make bread.'
- (103) Jonek [GAP ogia egitea] pentsatu du. **Basque**
 Jon-ERG bread-Det-ABS make-Nomin-Det-ABS decide Aux
 (3ABS-3ERG)
 'Jon has decided to make bread.'
- (104) Jonek Maria [GAP ogia egitera] bidali du. **Basque**
 Jon-ERG Maria-ABS bread-Det-ABS make-Nomin-ALL send
 Aux (3ABS-3ERG)
 'Jon has sent Mary to make bread.'
- (105) Jonek Mariari [GAP ogia egitea] gomendatu dio. **Basque**
 Jon-ERG Maria-DAT bread-Det-ABS make-Nomin-Det-ABS
 recommend Aux (3ABS-3DAT-3ERG).
 'Jon has recommended Mary to make bread.'

Each of the examples in the paradigm above is representative of a class of predicates that display the same behavior. (102-103) are potentially subject control instances, and (104-105) examples of object control. Interestingly, there is an asymmetry worth noting between (103 & 105) and (102 & 104). Specifically, in contrast to

the latter, (103) and (105) show that the matrix auxiliary displays agreement not only with matrix arguments as is expected, but crucially also with the whole embedded clause (signaled by ABS in the Auxiliary) that is marked with Structural Case (ABS). In contrast, in (102) and (104) the matrix auxiliary displays agreement only with the matrix arguments but not with the embedded clause, because the embedded clauses are not marked with structural Case but rather with Inherent Case. This asymmetry poses the question of which clauses are marked with Case in Basque, and more generally, what elements (nominal or clausal) take part in the Case marking system in Basque.

Turning back to the paradigm above, notice that, incidentally, only those clauses that are marked with Structural Case, namely those in (103 & 105), also display a Determiner preceding the Case marking. This suggests that only clauses that are Case marked with Structural Case are DPs in Basque. From this pattern, San Martin and Uriagereka conclude that only DPs enter the Case marking system in Basque¹⁰. Thus, the generalization in (100) should be

¹⁰ Indefinite arguments are also marked with a Determiner in Basque. Thus, in (i) the object may be interpreted as definite or indefinite.

(i) Jonek artoa erein du.

Jon-ERG corn-Det-ABS planted Aux (3ABS-3ERG)

'Jon has planted corn/the corn.'

modified to capture the fact that, it is not the unaccusative/transitive/ditransitive nature of the predicates that determines the emergent Case markings on the arguments in the clauses, but rather the number of DPs involved in them (whether nominal or clausal). This is captured in (106) below.

(106)

	OBJECT	SUBJECT	IND. OBJECT
One DP	—	ABS	—
Two DPs	ABS	ERG	—
Three DPs	ABS	ERG	DAT

The claim that only DPs are involve in the Case system in Basque is supported by the data in (107-108) below, where replacement of the non-DP clause in (102 & 104) by a regular nominal (DP) argument restores the expected Case pattern.

(107) Jonek hau saiatu du. **Basque**
 Jon-ERG this-ABS try Aux (3ABS-3ERG)
 'Jon has tried this'.

(108) Jonek niri hau bidali dit. **Basque**
 Jon-ERG I-DAT this-ABS send Aux (3ABS-1DAT-3ERG)
 'Jon has sent me this'.

To summarize, the descriptive generalization in Basque is that clauses containing a single DP (either nominal or clausal) mark it with the default Case, i.e., Absolutive (as in (98) and (102)). Clauses with two DPs mark the

object with Absolutive and the subject with Ergative Case (as in (97), (103), (104), and (107)). Finally, clauses with three DPs mark the object with Absolutive, the subject with Ergative and the indirect object with Dative Case (as in (99), (105) and (108)).

In order to account for the above descriptive generalizations, San Martin and Uriagereka suggest that the Case Values are those in (109), and that they are determined in the initial Lexical Array, from which a cyclic derivation is construed. On the other hand, the procedure of Case Value specification is plausibly the one in (110).

(109) Case Values

- a. Default Structural Case (bare or citation form)
- b. Marked Structural Case (morphologically specified forms)
- c. Special structural Case (oblique forms correlating with lexical selection).

(110) Structural Case Value Specification

- a. Assign default structural Case Value to the first/last D to Merge.
- b. Assign marked structural Case Value to the last/first D to Merge.
- c. Elsewhere, assign special structural Case Values.

The Case Value specification procedure in (110) allows for the desired parametric option. Ergabsolutive languages assign the Bare Citation form first (Absolutive), whereas Nominaccusative languages assign the bare form last (Nominative). Conversely, in the former type of languages,

marked forms come last (Ergative) and first in the latter (Accusative). This derives the fact that, in Ergabsolutive languages, clauses containing one DP are assigned the Default citation form or Absolutive Case. Clauses with two DPs mark the complement DP with Absolutive Case and the subject with Ergative Case. Finally, clauses containing three DPs mark the object with Absolutive Case, the subject with Ergative Case and the indirect object with Dative Case. This Case marking system is in accordance with the descriptive generalization that the elsewhere Case, namely Dative Case, only arises in the presence of both Absolutive and Ergative DPs.

Considering the Case system presented above, let us turn to contexts of EC. As expected for EC contexts, the embedded subject is invariably phonetically null. Let us focus on example (111) below.

- (111) Jon [PRO Mariari ogia ematen] saiatu da. **Basque**
 John-ABS Mary-**DAT** bread-Det-**ABS** give-Nomin-Inn try
 Aux (3ABS)
 'John has tried to give bread to Mary.'

The Case marking in the matrix clause is as expected. The embedded clause is not marked with Structural Case (i.e., it is not a DP) and thus, there is a single DP in the matrix clause, the subject. Being the single DP in the matrix clause, the subject is marked with ABS, the expected

Case. The surprising fact is that the emergent Case pattern within the embedded clause is not the expected one.

Specifically, there are two DPs in the embedded clause (*Mariari* and *ogia*). We would expect that one DP would be marked Absolutive and the other Ergative. However, instead of the ERG we find the DAT Case in *Mariari*. According to the generalization in (101) that the elsewhere DAT Case only arises in the presence of the ABS and ERG DPs, we need to conclude that the null subject PRO participates in the Case system in Basque, and that it is marked ERG in (111)¹¹.

If PRO is marked with regular Structural Case in (111), it is desirable to generalize and suggest that PRO bears regular Case in all EC contexts in Basque. Thus, in (112) below, PRO would be marked with ABS Case, the default Case corresponding to clauses containing a single DP.

(112) Jon [PRO etxera joaten] saiatu da. **Basque**
Jon-ABS PRO-ABS home go-Nomin-INN try Aux (3ABS)
'Jon has tried to go home'.

To conclude, I have provided evidence that PRO participates in the regular Structural Case system in Basque. Evidence comes from the Case system presented in San Martin and Uriagereka (2002), which captures the generalizations that (i) Case Valuation is sensitive to the

¹¹ Notice that the missing Ergative DP cannot be the matrix subject, since it is invariably marked ABS in subject control sentences.

number of DPs in the clause, whether DPs are nominal or clausal (ii) DAT only arises in the presence of ABS and ERG DPs.

5.2 Romanian

Another set of evidence that suggests that the embedded null subject in EC is marked with regular structural Case comes from languages that permit double subjects (Burzio (1981) and Piera (1983) for Italian and Spanish). The idea is that emphatic pronouns need a clausemate antecedent with identical Case marking as the emphatic pronoun. In the absence of other matrix nominals that bear the same Case as the doubled subject, we must conclude that the null embedded subject is the antecedent that bears this matching Case¹². Consider the Romanian data below taken from Comorovski (1986).

Doubled subject pronouns bear contrastive stress and usually immediately follow the verb, as illustrated in (113).

- (113) Maria_i a intrat ea_i prima. **Romanian**
Mary-NOM has entered she-NOM the-first
'It is Mary who entered the first.'
[Comorovski 1986]

¹² Parallel facts obtain in Malayalam as Mohanan (1982) observes, cited in Comorovski (1986).

Emphatic pronouns have been shown to display an anaphoric like behavior: they must be bound in the minimal Sentence containing them (Burzio (1981), Piera (1983)). In Romanian, this is illustrated by the contrast between (114-115), where only the former satisfies the clausemate condition. In (116) there are two potential antecedents but only the interpretation where the emphatic pronoun refers to *Joan* is possible.

- (114) *Maria_i va declara ea_i [că Ion a dispărut].* **Romanian**
 Mary-NOM will declare she-NOM Comp John has disappeared
 'It is Mary who will declare that John has disappeared.'

[Comorovski 1986]

- (115) **Maria_i va declara [că Ion a disparut ea_i].* **Romanian**
 Mary will declare Comp John has disappeared she
 [Comorovski 1986]

- (116) *Maria_i a spus [că Ioana_k a intrat ea*_{i/k} prima].* **Roman.**
 Mary-NOM has said Comp Joan has entered she-NOM the-first
 'Mary said that it is Joan who entered the first.'
 [Comorovski 1986]

The following example shows that the emphatic pronoun must agree in Case with its clausemate subject. In (117) the emphatic pronoun bears Dative case:

- (117) *Mariei_i îi place si ei_i /*ea_i înghetata.* **Romanian**
 to-Mary to-her (cl.) likes also to-her the ice-cream
 'Mary also likes ice-cream.'
 [Comorovski 1986]

Turning now to Control in EC complements, the emphatic pronoun may be located in the embedded clause, as in (118).

The clausemate condition illustrated above would suffice to conclude that the antecedent of the emphatic pronoun must be PRO, and that, by the Case matching requirement, PRO bears regular Case. However, notice that the examples that illustrate the clausemate condition above (see (114-116)) involve complements to propositional predicates, which, in contrast to complements of control predicates, contain a great independence with respect to the matrix clause (see chapter 1, section 3.1). In other words, it is doubtful whether the embedded clause of control predicates constitutes a clause in the same way as (114-116) do. Considering this observation, (118) provides no conclusive evidence that PRO is marked with regular Case because one might argue that the antecedent of the emphatic pronoun is the matrix subject, which bears the same Case as the emphatic pronoun.

- (118) Maria_i a încercat [PRO_i să ajungă ea_i prima]. **Romanian**
 Mary-NOM has tried arrive she-NOM the-first
 'It is Mary that has tried to arrive first.'
 [Comorovski 1986]

Interestingly, two further sets of data concerning Control suggest that PRO bears regular structural Case. The first evidence comes from Object Control. In (119) an emphatic pronoun marked with Nominative Case in the embedded clause refers to the matrix object controller.

However, the matrix object is marked with Accusative Case, and according to the Case matching requirement, the matrix object cannot be the immediate antecedent of the emphatic pronoun. In the absence of any other arguments that may serve as an antecedent for the emphatic pronoun, we must conclude that the antecedent of the emphatic pronoun is PRO. Consequently, by the Case matching requirement, we must conclude that PRO is marked NOM in (119).

- (119) Ion a ajutat-o_i [PRO să ajungă ea_i prima]. **Romanian**
 John has helped her-ACC arrive she-NOM the-first
 'John has helped her to arrive the first.'

Further evidence in favor of the idea that PRO is marked with regular Case is provided in (120), where the matrix subject marked Nominative cannot be the antecedent of the emphatic pronoun marked with Dative in the embedded clause. In the absence of other potential antecedents, we must conclude that the null embedded subject (PRO) is marked with Dative.

- (120) Maria_i va încerca [PRO_i să nu i se facă ei_i **Romanian**
 Mary-NOM will try not miss-3pl her-DAT
 prima dor de București.
 the first of Bucharest
 'Mary will try not to be the first of them who misses Bucharest.'

To summarize, the above Romanian data demonstrates that PRO must be marked with regular Case. The conclusion

has been drawn considering the fact that emphatic subjects display the same Case as their antecedents.

5.3 Icelandic

Sigurðsson (1991) convincingly argues that PRO is Case marked in Icelandic. Evidence comes from comparison of PRO and lexical subjects on several morphosyntactic phenomena that crucially depend on Case-marking. Icelandic is interesting in this respect, since apart from regular structural Cases it uses Quirky-Case marked nominals with certain predicates. Note that most of the evidence that he provides involves control predicates of the PC class. However, in Sigurðsson (2000) we find that parallel facts obtain for EC (see below).

The first evidence he presents comes from morphological Case chains that involve Floating Quantifiers and Secondary predicates in infinitives. Floating Quantifier 'all' in Icelandic displays a full-fledged adjectival inflection, and Case agreement between the antecedent and the Floated Quantifier is mandatory. All examples are from Sigurðsson (1991).

- (121) Strákunum leiddist öllum í skóla. ***Icelandic***
The boys-DAT bored all-DAT.pl.m in school
'The boys were all bored in school.'

- (122) Strákanna var allra getið í ræðunni. **Icelandic**
 The boys-GEN was all-GEN.pl.m. mentioned in the
 speech
 'The boys were all mentioned in the speech.'

Turning now to Control infinitives, consider the data in (123-124). These examples show that the Case on the Floated Quantifier is distinct from the matrix nominal, which indicates that PRO heads a morphological Case Chain parallel to the way lexical subjects do. The conclusion is that this can only be achieved if PRO is Case marked.

- (123) Strákarnir vonast til [að PRO leiðast ekki **Icelandic**
 the-boys-NOM hope for to PRO-DAT get
 öllum í skóla].
 all-DAT in school
 'The boys all hope not to get bored in school.'

- (124) Strákarnir vonast til [að PRO verða **Icelandic**
 the-boys-NOM hope for to PRO-GEN be
 allra í ræðunni].
 all-GEN in the school.
 'The boys all hope to get to school.'

Additional evidence for the idea that PRO is Case marked comes from adjectival predicates and passive participles, which agree in Case, Number and Gender only with their clausemate Nominative subject. In other words, only Nominative arguments can 'control' agreement in finite clauses. In the absence of a Nominative argument, adjectives invariably display default agreement. The two instances are shown in (125) and (126) respectively. (127)

shows that regular agreement with Quirky subjects is impossible.

(125) Strákarnir höfðu verið duglegir. *Icelandic*
the boys-NOM.pl.m had (3.pl) been energetic-NOM.pl.m
'The boys had been energetic.'

(126) Strákunum hafði verið kalt. *Icelandic*
the boys-DAT had (dflt.) been energetic-(dflt.)
'The boys had been freezing.'

(127) *Strákunum höfðu verið köldum. *Icelandic*
the boys-DAT had (3.pl) been cold-DAT.m/f/n
'The boys had been freezing.'

Interestingly, the generalization found in finite clauses carries over to Control Infinitivals. The crucial example is (129), where the presence of Default Agreement suggests that PRO bears Quirky Case.

(128) Strákarnir vonast til að PRO verða *Icelandic*
the boys-NOM hope for to PRO-NOM be aided
aðstoðaðir/*aðstoðað.
(NOM.pl.m)/*(dflt.)
'The boys hope to be aided (by somebody).'

(129) Strákarnir vonast til að PRO verða *Icelandic*
hjálpað/*hjálpaðir/*hjálpuðum.
the boys-NOM hope for to PRO-DAT be helped
(dflt.)/*(NOM.pl.m)/*(DAT.pl.m)
'The boys hope to be aided (by somebody).'

Proof that the matrix Nominative in (128) is not the inducer of the Nominative Case and agreement markers in the adjective in the embedded clause is provided in (130). This example lacks a Nominative argument in the matrix clause. Nevertheless, the Floating Quantifier and the Passive Participle both display Nominative Case and Agreement. The

conclusion is that PRO is the antecedent that bears
Nominative Case and Agreement.

- (130) Strákunum leiddist að verða kosnir í stjórnina **Icel.**
the boys-DAT annoyed(dflt.) to be elected(NOM.pl.m)
to the board
'The boys were annoyed by being elected to the board'

The above facts are evidence that the phonetically
null subject of the embedded clause in Control environments
receives regular Case. Notice that all control predicates
above are of the PC class. Since, in this thesis, I am
investigating the mechanics of EC, it is crucial that I
present evidence that parallel facts obtain for EC.
Specifically, I will provide evidence that PRO is marked
with Case with predicate *order* in Icelandic.

To start with, examples (131-132) show that predicate
order in Icelandic is of the EC class rather than of the PC
class. Recall from chapter 2 that two characteristics of EC
are that (i) the controlled subject must be phonetically
null and (ii) unlike in PC, the null subject must be
strictly and exclusively coreferential to its antecedent.
The former is illustrated in (131), where lexical subjects
are banned from the embedded subject position. (132)
illustrates that, the embedded predicate cannot be a
collective predicate, which in turn shows that the
reference of the null subject cannot include PRO and some

salient entity in the discourse. In other words, PRO must be exclusively coreferential to the antecedent. In short, these two aspects demonstrate that predicate *order* is of the EC type in Icelandic.

(131) Við skipuðum henni að PRO/*hun verða first **Icelandic**
 We ordered her(Df.sg) to she be first-Nf.sg
 'Lit. We ordered her to she be number one.'
 [Ottosson, p.c.]

(132) *Við skipuðum henni að PRO hittast klukkan 6. **Icel.**
 We ordered her(Df.sg) to meet at 6
 'We ordered her to meet at 6.'
 [Ottosson, p.c.]

I will next show that PRO is marked with regular Case in EC contexts in Icelandic. As Sigurðsson (2000) notes, PRO only shows number and the gender agreement with the controller whereas the Case of PRO may be distinct¹³ from that of the controller. For example, (133-134) shows that, with matrix EC predicates, PRO may bear Nominative Case, which is a different Case from the Controller's (Accusative in (133) and Dative in (134)). This indicates that the Case of PRO is assigned by the local predicate, which in turn suggests that PRO is marked with Case in Icelandic.

¹³ In fact, Sigurðsson states that '(in control structures) case-copying down into infinitives is marked or questionable for many speakers and even out for some whereas case-copying in secondary predicates is the unmarked option in monoclausal structures'.

- (133) Við skoruðum á hana_i að PRO_i verða ***Icelandic***
 fyrst/firsta/*fyrstri
 we dared on her (Af.sg) to PRO(N) be first
 (Nf.sg/Af.sg/*Df.sg)
 'We exhorted her to be number one.'
[Sigurðsson 2000]
- (134) Við skipuðum henni_i að PRO_i verða ***Icelandic***
 fyrst/*firsta/fyrstri
 We ordered her(Df.sg) to PRO(N) be first
 (Nf.sg/*Af.sg/Df.sg)
 'We ordered her to be number one.'
[Sigurðsson 2000]

To summarize, Icelandic secondary agreement facts show that PRO receives Case from its local predicate, and as a consequence, that the Case on PRO may be distinct to the Case of the controller. Instances where the Case on PRO and the controller are distinct are proof that PRO is marked with Case in Icelandic.

5.4 Greek

Philippaki-Warbuton and Catsimali (1999) present extensive evidence that the empty category in obligatory control in Greek is marked with regular structural Case. They argue that this, together with the fact that Greek lacks infinitival clauses, is evidence that in Greek, the empty category in Control is pro rather than PRO. I argue against the claim and suggest that the null controlled subject is PRO rather than pro.

5.4.1. Evidence that the null subject is marked Nominative

This section summarizes the evidence presented in Philippaki-Warbuton and Catsimali (1999) in favor of the idea that the null subject¹⁴ in Greek Control is marked with regular Case.

The first evidence comes from data involving predicate adjective phrases. These elements display gender, number, and Case agreement with their subject, as illustrated in (135-136) below.

(135) O Janis ine kalos. **Greek**
the Jani-Nom-sg is-3sg good-Nom-sg
'John is nice.'

(136) I Eleni ejine omorfi. **Greek**
the Eleni-Nom-sg became beautiful-Nom-sg
'Helen has become beautiful.'

Assuming the general fact that predicate phrases license their Case from their subject NP, example (137) below involving Exhaustive control provides evidence that the empty category in the embedded clause is marked with Nominative Case. Philippaki-Warbuton and Catsimali note that, in principle, the source of the Nominative Case on

¹⁴ In this section, I will not call this subject PRO but rather 'the null subject'. The reason is that this section includes a discussion on whether the embedded null subject in Greek control is pro or PRO. In the end, I will argue that it is PRO rather than pro.

the predicate adjective in (137) might be the matrix subject through a long distance agreement. However, the object control construction in (138) shows that this cannot be the case, and that the source of the Case in the predicate adjective is invariably its local null subject. Specifically, in (138) the embedded predicate marked with Nominative refers to the main clause object. However, the matrix object is marked with accusative Case. This Case mismatch suggests that the only source for the Case in the predicate adjective is the local null subject, and in turn, that the null subject is marked Nominative in (137-138).

(137) I Eleni arhise na jinete poli omorfi. **Greek**
 the Eleni-Nom-sg started-3sg subj. become-3sg very
 pretty-Nom-sg
 'Helen has started to become very pretty.'

(138) Evala to Nikon a dithi Meghas Aleksandhros. **Greek**
 made-1.sg the Niko-acc subj dress-3sg Alexander the
 Great-Nom
 'I made Nikos dress up as Alexander the Great.'

Another piece of evidence suggesting that the embedded subject is marked with regular Case in Greek is provided by the clitic *monos* (X-self) and *idhjos* (the same). These elements display agreement in gender, number and Case with the NP that they modify, as illustrated in (139-142) below. Note that these elements may modify arguments marked with diverse Case markings such as nominative (139-140), accusative (141), or genitive (142).

- (139) O Janis irthe monos-tu. **Greek**
the Jani-Nom came by himself-Nom
‘John came by himself.’
- (140) O Janis o idhjos irthe ke mu to ipe. **Greek**
the Jani-Nom the same-Nom came-3sg and cl-gen cl-acc
told
‘John himself came and told me this.’
- (141) Milisa sto Jani ton idjo. **Greek**
spoke-1sg to-the Jani-acc the same-acc
‘I spoke to John himself.’
- (142) Milisa tu Jani tu idhju. **Greek**
spoke-1sg the John-gen the same-gen
‘I spoke to John himself.’

In a parallel fashion, in constructions involving an EC predicates, when *monos* and *idhjos* are placed in the embedded clause they display the agreement properties illustrated above. In the absence of the explicit subject in such constructions, the question is what argument these elements modify. Considering an example like (143), where the modifier displays Nominative Case agreement, one might argue that the element is agreeing with the matrix subject marked Nominative via some long distance agreement. However, Philippaki-Warburton and Catsimali note that the object control examples in (144-145) discard this possibility. Specifically, the modifier in the embedded clause is marked with Nominative, whereas the element it refers to in the matrix clause is marked with a distinct Case (i.e., accusative). The conclusion is that the

modifier must be modifying the phonetically null subject in the embedded clause. Considering the case agreement that *monos* and *idhjos* display, we must conclude that the null subject in (143-145) is marked with Nominative Case.

(143) *Sto telos arhise o Janis na lei o idhjos psemata. Gr.*
 in the end began-3sg the Jani-Nom subj. say-3sg the
 same-Nom lies
 'In the end John started to tell lies himself.'

(144) *Evala to jani na fai monos tu. Greek*
 made-1sg John-acc subj. eat-3sg alone-nom
 'I made John eat by himself.'

(145) *Arangase ti Maria na kuvalai I idhja ta vivlia. Greek*
 forced-3sg the Maria-acc subj. carry-3sg the same-nom
 the books
 'He forced Mary to carry the books herself.'

Finally, emphatic subjects also provide evidence that PRO is marked with regular Case. Consider (146), where the emphatic subject marked with Nominative refers to the accusative Case marked matrix object. Assuming that emphatic subjects must agree in Case with the argument they refer to, we must conclude that the emphatic subject in (146) refers and modifies the embedded null subject. In turn, this suggests that the embedded null subject is marked with Nominative Case.

(146) Anangasan tin Eleni na milisi afti I idhja.
forced-3sg the Eleni-acc subj. speak-3sg she herself-
Nom
`They forced Helen to speak herself.'

To summarize, Philippaki-Warburton and Catsimali show that the Case agreement facts involved in certain modifiers in Greek provide evidence for the idea that the null subject in Greek Control is clearly marked with regular Case.

Philippaki-Warburton and Catsimali (1999) argue that the fact the null subject is marked with Case indicates that it is *pro* rather than PRO. This follows from the assumption that unlike PRO, *pro* is Case marked.

In addition to the evidence provided by the Case marking on the subject, they present another fact that, in their view, supports the *pro* status of the null subject in Greek control: that Greek lacks infinitives altogether. In other words, they assume that PRO may only surface in languages that contain infinitives (e.g. English), and that the lack of infinitives correlates with the existence of *pro* rather than PRO in such languages (e.g. Greek). They further argue that the coreference requirement in control is due to semantic factors, i.e., control predicates require identity between the relevant subjects. In order to

avoid redundancy, the Gricean maxim of Quantity prohibits lexical subjects in Control.

There is a surprising fact with the assumption that in the languages that lack infinitives invariably contain *pro* in control. In their terms, unlike the locus where PRO is licensed, the position where *pro* appears is a Case position, and in principle, a site where lexical subjects are licensed. The puzzle is that, in Greek EC, lexical subjects are invariably banned in this position (see chapter 2, section 2.1.), a clear indication that the subject is PRO rather than *pro*. Although the predicates that induce genuine control belong to a well-defined semantic class (see chapter 2 section 2), I assume that control is syntactic rather than pragmatic. In other words, the fact that PRO is phonetically null and strictly coreferential cannot be explained in semantic and pragmatic terms. One evidence that Control is syntactic is exemplified by Kalkatungu, where coreference between subjects is expressed by the use of the Antipassive Case pattern in the embedded clause rather than the Transitive Case pattern (Blake 2001), as would be expected for transitive contexts. Antipassives change the Case of the object from Absolutive to Oblique, and the Case of the subject from Ergative to Absolutive. That the Antipassive

is employed in Kalkatungu control is illustrated in (147), where the object, which in the transitive version would appear as Absolutive, appears as oblique. Although the Case in the embedded subject is not visible because it is phonetically null, according to the Antipassive use it changes from the Ergative to the Absolutive.

(147) I-Erg told you [PRO to tell the boy-DAT [PRO to wash
the car-DAT]

[Blake, p.c.]

This change in Case valencies clearly indicates that control is syntactic. In other words, if all there is in order to explain coreference and the null nature of the embedded subject is a semantic and Gricean pragmatic factor, we should not find syntactic effects such as Case valency pattern changes as we do in Kalkatungu. This suggests that the Gricean explanation for the null nature of the embedded subject cannot be sustained. Therefore, we are left without an explanation of why the embedded subject position, being a Case position, does not host lexical subjects. This suggests that the embedded null subject in Control is PRO rather than *pro*, and that PRO is marked with regular Case in Greek.

6 Conclusion

In this Chapter, I have provided evidence that the embedded null subject in complements of EC predicates is marked with regular Case. In particular, I have provided evidence from various languages that are mostly genetically unrelated, such as Basque, Romanian, Icelandic, Greek and Kalkatungu. This proposal is closer to the Case Theoretic approach, in the sense that it distinguishes Raising from Control. In addition, assuming that movement from a Case to another Case position is banned by Last Resort, it provides indirect support in favor of the view that the Theta Criterion must be respected. On the other hand, the fact that PRO bears regular Case renders the postulation of a special Null Case specific for PRO unnecessary. It also suggests that the Case Filter holds for all nominals irrespective of their phonetic null or contentful status. Considering that the difference between Raising and Control T is that the latter is [+T], it is reasonable to assume that [+T] assigns regular Case to subjects (PRO/lexical). Thus, in view of the fact that both PRO and lexical subjects are marked with Case, the relevant question addressed in the next chapter is under what circumstances lexical subjects and PRO are licensed (the complementary distribution between PRO and lexical subjects). This topic will be closely linked to the claim addressed in this

chapter that, contra Chomsky (1999), EC predicates take TP complements rather than CPs.

CHAPTER 4: THE CONTRIBUTION OF COMP TO THE SYSTEM

Chapter 3 has argued that both PRO and lexical subjects equally arise in configurations of regular Case. This discards the possibility that Case distinguishes between their licensing conditions. In other words, the complementary distribution between PRO and lexical subjects is not related to Case. Thus, the aim of this chapter is to identify the distinguishing feature in licensing PRO vs. lexical subjects.

In this chapter, I note that, descriptively, PRO arises only in complements of the TP type, whereas lexical subjects are licensed in CP Phases. In fact, regardless of the finite or infinitival nature of the clause involved, whatever strategy that a particular language employs for filling Comp invariably correlates with lexical subject licensing. In contrast, the null subject in EC (PRO) arises only when there is no Comp involved.

In the last section I inquiry into the question of what the contribution of Comp may be to the system. I argue that the presence of Comp endows T with the [person] feature, rendering T Complete (i.e., [+T, +person]). This suggests that lexical subjects are licensed when T is Complete. In contrast, the lack of Comp/[person] in EC

suggests that Control T is Partial (i.e., [+T, -person]). This is not an explanation of the complementary distribution of PRO and lexical subjects, but the distinction in the nature of the Probes involved in each instance will lead us to the understanding of the distribution and the interpretation of PRO in the Chapter 5.

1 The Distributional Problem

The problem of the Complementary Distribution between PRO and lexical subjects has traditionally been linked to the finite or nonfinite nature of clauses. GB makes two claims in this respect: first, lexical subjects are licensed in finite contexts because lexical subjects need Case and Finite T is able to assign it. Second, PRO is compatible with Infinitival contexts because PRO receives no Case (since it only appears in ungoverned positions) and Infinitival T does not assign Case. In Chomsky and Lasnik (1993) the finite vs. nonfinite distinction is also relevant in explaining the complementary distribution of PRO and lexical subjects. Finite T assigns regular structural Case to lexical subjects. PRO needs a special type of structural case called Null Case and crucially, only certain non-finite Ts may assign this Case. Briefly,

the standard claim restricts PRO to nonfinite T and lexical subjects to finite T. Extensive empirical evidence against this idea suggests that it is flawed. We find that nonfinite contexts license lexical subjects in many languages (section 1.1.1) and conversely, that finite contexts often license PRO or NP-trace (section 1.1.2). I conclude that finiteness does not provide an explanation of why PRO and lexical subjects are in complementary distribution. Further investigation on this matter (section 1.2.) provides extensive empirical evidence supporting the idea that PRO is licensed in TPs and lexical subjects in CPs. This is merely a correlation and does not provide an explanation for the central distributional problem at hand. However, the relevance of the presence/absence of a CP layer will turn out to be crucial in accounting not only for the distribution of PRO but also for its interpretation.

1.1 The traditional observation

The GB explanation of the complementary distribution between lexical subjects and PRO is the following: lexical subjects need Case according to the Case Filter, and only

finite INFL defined as [+T, +AGR]¹ is able to assign Case. In contrast, the PRO-Theorem requires that PRO cannot be governed, which, under the assumption that Case is assigned under Government, amounts to saying that PRO cannot have Case. PRO may only appear in nonfinite contexts, where INFL is unable to assign Case. This explains the paradigm in (1-3).

- (1) John/*PRO left home early that morning.
- (2) John thinks that Mary/*PRO is smart.
- (3) John managed PRO/*Mary to leave the party by 10.

The idea that Nonfinite T is unable to assign Case to the local subject is strengthened by certain raising asymmetries. Assuming that raising of a DP to a matrix non-theta position takes place for Case checking purposes, we expect that Raising only takes place from a non-Case position, namely from infinitival clauses (6) but not from finite clauses (hyperraising)(5).

- (4) It seems that [John has left].
- (5) *John seems that [Ø has left].
- (6) John seems [Ø to have left].

In Chomsky's Minimalist approach to Control, PRO bears Null Case. Notice that Chomsky and Lasnik (1993) still

¹ On the notion Finiteness see footnote 2 in Chapter 1 of this thesis.

consider that Null Case is present only in certain nonfinite contexts. Crucially, the finite vs. nonfinite distinction seems to play a role in Minimalism too.

The traditional finite-nonfinite distinction makes two predictions. First, in nonfinite clauses, we should find PRO or NP-trace rather than lexical subjects. Second, the invariable ability to assign (regular) Case by finite INFL should always correlate with lexical subjects, and in contexts where raising predicates are involved raising the subject to the matrix clause should be prohibited (hyperraising). This is schematically shown in (7):

(7)

	Lexical subjects	NP-trace/PRO
Finite INFL	✓	✗
Non-finite INFL	✗	✓

Although the system presented above explains the English facts, we find extensive counterevidence to the predictions in (7). The following sections illustrate how finiteness does not correlate with the ability of T to assign Case and hence it is unable to predict the occurrence of lexical/null subjects (PRO or NP-trace). Notice that, in view of the fact that the descriptive facts are not correct, we must conclude that the traditional

explanation about the distribution of PRO is not correct either. This is welcome in view of the fact that, according to chapter 3 of this thesis, PRO receives regular Case as other nominals do.

1.1.1 Infinitives with lexical subjects

This section presents some examples of the widely attested fact that Infinitives may appear with lexical subjects across languages. Several diverse language-specific accounts have been provided but few have reached any generality for explaining the phenomenon (see Mensching 2000 for one proposal in the Romance languages).

Mensching (2000) extensively discusses infinitives with lexical subjects in the Romance languages (Italian, French, Spanish, Portuguese, Galician, Romanian, Occitan and Catalan). He suggests that this is a general property of Romance languages that can be traced back as early as the Middle Ages. The same phenomenon is attested in other languages such as Sardinian (Allan Jones 1992), some Flemish dialects of Dutch (Haegeman 1986 and references therein), Basque (Ortiz de Urbina 1989) and Malayalam (Mohanalan 1982).

One well-known instance is the case of Modern Italian, which was first discussed in Rizzi (1982). (8) shows that

the lexical subject *loro* appears to be licensed in a nonfinite context.

- (8) Questa commisssione ritiene [aver loro sempre **Italian**
this commission believes to-have they always
ottemperato agli obbligi previsti dalla legge].
obeyed to-the obligations provided by the law
'This commission believes that they have always obeyed
the obligations provided by the law.'

The following examples illustrate a similar phenomenon in Spanish, Portuguese, Basque and Sardinian. All contexts are nonfinite, and nonetheless, lexical subjects are licensed.

- (9) Al castigar el juez a los culpables. **Spanish**
on-the to-punish the judge ACC PART the guilty
'When the judge punished to the guilty.'
[Fernández Lagunilla 1987]

- (10) O Manel pensa terem os amigos levado o livro. **Portug.**
the Manel thinks the friends to-have-3PL taken-away
the book
'Manel thinks that the friends had taken away the
book.'
[Raposo 1987]

- (11) Jonek [Maria kalera joatea] erabaki du. **Basque**
Jon-ERG Maria-ABS street-ALL go-NOM-Det-ABS decide Aux
(3ABS-3ERG)
(lit.) 'John has decided Mary to go to the street.'

- (12) Non keljo a cantere tue. **Sardinian**
'I do not want you to sing.'
[Allan Jones 1992]

- (13) Deur ik da te zeggen hee-se dat hus gekocht. **Flemish**
by I that to say has-she that house bought
'Because of my saying that, she has bought that
house.'
[Haegeman 1986]

- (14) amma kutti talaraan aagrahiccu. **Malayalam**
mother-nom child-nom tire-INF desired
'Mother wanted the child to be tired.'
[Mohanani 1982]

Briefly, there is extensive crosslinguistic evidence showing that non-finite contexts license lexical subjects. This suggests that, finiteness is not relevant in licensing lexical subjects as traditionally has been assumed. The following section shows that the reverse prediction in (7) does not hold either: Raising and Control, which are traditionally believed to be licensed only in infinitival contexts, extensively appear in finite clauses across languages.

1.1.2 Finite clauses, PRO and Raising

The finite versus nonfinite distinction as a standard diagnosis for the distribution of empty and lexical subjects also predicts that null subjects in Control and Raising should never occur in/from finite contexts. Interestingly, though, we find either EC or Raising, or both, from finite clauses in most languages of the Balkan area (as first noted in Romanian by Grosu and Horvath 1984), Basque (Artiagoitia 2001) and Arabic (Abdel Ghani, M.K 1981, Soltan 1996), among others.

Starting with Control, the following examples illustrate that Exhaustive Control is possible in

Subjunctive complements, which are considered to be finite. Balkan languages have almost invariably lost the Infinitive (Joseph 1983) and employ subjunctive complements with predicates that display agreement markers with the subject. Some examples from Balkan languages are provided in (15-19). (20) illustrates EC in subjunctive complements in Arabic.

- (15) Ta pedhia arxisan [na trexoun]. **Greek**
the children-NOM started-3pl Subj. Run-3pl
'The children started to run.'
[Alexiadou & Anagnostopoulou 1999]
- (16) Am început [să citesc Cei trei mușchetari]. **Romanian**
have-1sg started Subj. read-1sg the three musketeers
'I have started to read The Three Musketeers.'
[Dobrovie-Sorin 2001]
- (17) Fillova [të lexoj Tre Muskëtjërët]. **Albanian**
started-1sg Subj. read-1sg three Musketeers-the
'I started to read The Three Musketeers.'
[Dobrovie-Sorin 2001]
- (18) Zaboraviv [da go napravam toa]. **Macedonian**
forgot-1sg Subj. it do-1sg that
'I forgot to do that.'
[Rudin 1988]
- (19) Ana je naterala Mariju_i [da GAP_i dodge]. **Serbo-Croatian**
Ana Aux forced Mary Subj. come
'Ana forced Mary to come.'
[Farkas 1992]
- (20) hawala Zayd-un [ʔan yarhala]. **Arabic**
tried-3sg Zayd-Nom Subj. leave-3sg
'Zayd tried to leave.'
[Soltan p.c.]

On the other hand, the traditional approach does not expect to find any instance of Raising of a DP from a

finite clause to a matrix clause. The reason for this is that finite INFL assigns Case to the local subject and therefore the subject should freeze in place. However, we find Raising from subjunctive finite clauses at least in Romanian and Bulgarian. The Romanian case was first attested by Grosu and Horvath (1984) and has been widely discussed together with Control in Roussou (2001), Dobrovie-Sorin (2001) and Philippaki-Warbuton (1987) among others. All the examples below involve Raising predicates with subjunctive finite complements. (22-23) show that raising has taken place from this environment², an unexpected fact for the traditional account of the distribution of NP-trace/PRO.

- (21) Sa nimerit ca toți băietii să fie bolnavi. **Romanian**
 It has happened Comp all boys the Subj. be sick
 'It has happened that all the boys are sick.'
 [Roussou 2001]
- (22) Toți băietii sau nimerit să fie bolnavi. **Romanian**
 All boys the refl-have happened Subj. be sick
 'All the boys happened to be sick.'
 [Roussou 2001]
- (23) Coppii tăi par să fie foarte obosiți. **Bulgarian**
 children-the your seem Subj. be-3sg-subj very tired
 'Your children seem to be very tired.'
 [Dobrovie-Sorin 2001]

² The fact that it is actually Raising and not Topicalization in (22-23) is provided by the data in section 1.2., which shows that Complementizers are prohibited in such contexts.

To summarize, the above data illustrate that, contrary to traditional expectations, the finite vs. nonfinite distinction does not predict the distribution of lexical subjects and empty subjects like PRO/NP-trace. In view of the evidence provided in Chapter 3 showing that both lexical subjects and PRO are assigned regular Case, we may conclude that there is a factor independent from finiteness and Case that accounts for the general fact that lexical subjects and PRO are in complementary distribution. I will address this issue in section 1.2.

1.2 Different Structural conditions: TP vs. CP

In this section I will show that, descriptively speaking, lexical subjects are licensed in complements of the CP-type³, and phonetically null subjects (NP-trace and PRO) are exclusively licensed in TPs. The latter observation is already present in Roussou (2001), who uses this argument to equate Control to Raising. This descriptive generalization is not an explanation for the complementary distribution of DPs and PRO, but it will lead us to the ultimate understanding of the facts about the distribution of PRO.

³ The involvement of Comp in licensing lexical subjects is also noted in Bittner and Hale (1996).

There are various strategies that languages employ for completing the CP layer. Some languages employ a Complementizer specific for subjunctive clauses (section 1.2.1). Others raise some verbal element to Comp (section 1.2.2), and others introduce the embedded clause with a Complementizer that is homophonous to a Structural Case marking (section 2.2). Interestingly, all these contexts license lexical subjects and disallow PRO. In section 2 I will suggest that the common property of all these strategies is the presence of the [person] feature in Comp.

1.2.1 Subjunctive Complementizers

In this section I will use Romanian⁴ to illustrate the central claim of this section: whereas CPs license lexical subjects and disallow PRO/NP-trace, TP_s license PRO/NP-trace and disallow lexical subjects.

Romanian employs two strategies to license lexical subjects. One involves the Subjunctive Complementizer itself. The other involves raising the subjunctive particle (*să*) together with the embedded predicate to Comp. The latter strategy will be discussed in the next section.

⁴ I will discuss the case of Romanian in some detail, because to my knowledge, it is the language that most clearly shows the existence of a subjunctive Complementizer.

Null subjects resulting from Raising or EC disallow the presence of Complementizers. Grosu and Horvath (1984) already note that Raising from subjunctive complements is licensed in Romanian as long as there is no Complementizer present. This fact has been extensively discussed in the literature (Rivero 1989; Motapanyane 1995, among others) and is illustrated in the paradigm below with raising predicate *seem* and the epistemic modal *must*. The crucial examples are (25) and (28). They show that Raising is not possible in the presence of the Subjunctive Complementizer. In contrast, lexical subjects are licensed in the presence of Comp in the embedded clause, as in (24) and (26).

- (24) Sa nimerit [că toți băieții să fie bolnavi]. **Romanian**
 refl have.pres.3sg happened Comp all the boys subj be
 sick
 'It happened that all the boys were sick.'
 [Grosu and Horvath 1984]

- (25) Toți băieții sau nimerit [(**ca*) să fie bolnavi]. **Romanian**
 all the boys refl have.pres.3sg happened Comp Subj. be
 sick
 'All the boys happened to be sick.'
 [Grosu and Horvath 1984]

- (26) Trebuia [ca studenții să plece]. **Romanian**
 must-3sg Comp students-the Subj. leave
 'It must have been that the students left.'
 [Rivero 1989]

- (27) Studenții trebuiau [să plece]. **Romanian**
 students-the must-3pl Subj. leave
 'The students must have left.'
 [Rivero 1989]

- (28) *Studentii trebuiau [ca să plece]. **Romanian**
 Students-the must-3pl Comp Subj. leave
 'The students must have left.'
 [Rivero 1989]

The situation with EC predicates is parallel to what we have found for Raising contexts, i.e., EC disallow a Complementizer in the embedded complement clause as noted by Farkas (1985), among others. This is illustrated in subject control (29) and object control (30) below. This suggests the generalization that we only find lexical subjects in the presence of a lexical Complementizer, and phonetically null subjects (NP-trace and PRO) in its absence.

- (29) Mioara_i a început (*ca) să se_i pregătească **Romanian**
 Mioara has started Comp Subj. Refl. prepare-3sg
 de plecare.
 of departure
 'Mioara has started to prepare the departure.'
 [Alboiu & Motapanyane 2000]
- (30) Ion_i îl_k ajută pe Dan_k [*ca *el/GAP_{k/*i/*j} să plece]. **Romanian**
 John him-helps ACC Dan Comp he Subj. leave
 'John helps Dan to leave.'
 [Farkas 1985]

That the TP vs. CP distinction is relevant in licensing PRO and lexical subjects is further supported by the fact that in Romanian, and more generally in Balkan languages, another strategy that crucially fills Comp licenses lexical subjects and disallows PRO: raising the subjunctive particle together with the embedded predicate

to Comp. This is illustrated in the next section by Romanian, Greek and Arabic, Italian and European Portuguese.

1.2.2 Postverbal subjects.

This section illustrates another syntactic factor that results in lexical subject licensing: verb raising to Comp. This phenomenon takes place independently of the finite or nonfinite nature of the embedded clause, which, once more, suggests that DP licensing and finiteness are unrelated.

1.2.2.1 Romanian

In Romanian, apart from the use of the Subjunctive Complementizer discussed in the previous section and illustrated in (31-32), there is another strategy for filling Comp, namely, verb raising to Comp. As a result of this movement, subjects appear in postverbal position. Crucially, this strategy licenses lexical subjects as shown in (33).

- (31) Ion vrea [ca el să rezolve problema]. **Romanian**
Ion want-3sg Comp he Subj. solves the problem
'Ana wants (him) to solve the problem.'
[Farkas 1985]
- (32) Ion speră [ca Ghita să rezolve problema]. **Romanian**
Ion hopes Comp Ghita Subj. solve the problem
'Ion hopes that Ghita will solve the problem.'
[Farkas 1985]

- (33) Ion vrea [să mănice Maria]. **Romanian**
 John wants Subj. eat-3sg Mary
 'John wants Mary to eat.'
 [Watanabe 1993]

Notice that all the predicates that allow lexical subjects are PC predicates and not EC predicates. This is expected considering the idea in chapter 2 that genuine Control (PRO) only arises with EC predicates, whereas PC contexts license pro in some languages such as Romanian. Since Romanian is a pro-drop language, the empty subject in cases like (34) parallel to (33), is arguably pro rather than PRO. This is supported by the fact that distinct agreement markers on the two predicates are possible. In other words, the embedded and matrix subjects may be disjoint in reference, a clear indication that EC is not involved in such instances.

- (34) Sper [să plece mâine la Londra]. **Romanian**
 hope-1sg Subj. leave-3sg tomorrow at London
 'I hope she will leave for London tomorrow.'
 [Alboiu & Motapanyane 2000]

The analysis of (33-34) as involving *să* in Comp is supported by the fact that nothing in the clause can be placed in front of the subjunctive particle *să* unless it is stressed, contrastive or Focused, as noted by Farkas (1984) in the following examples:

- (35) *Vreau mâine să meargă la Cluj. **Romanian**
 want-1sg tomorrow Subj. go-3sg at Cluj
 'I want him/her to go to Cluj tomorrow.'

(36) Vreau MIINE să meargă (și nu poimîine). **Romanian**
 want-1sg tomorrow Subj. go-3sg and not the day after
 'I want him/her to go TOMORROW (and not the day
 after).'

(37) Vreau ANA să vină cu noi și nu Ion. **Romanian**
 Want-1sg Ana Subj. come-3sg with us and not Ion
 'I want ANA to come with us and not Ion.'

Notice that when V-T-C movement takes place,
 postverbal subjects are licensed even when Raising
 predicates are involved (39). In other words, as expected,
 the presence of Comp blocks raising and allows for lexical
 subjects in the embedded clause.

(38) *Sa nimerit [doctorii să fie toți de accord]. **Romanian**
 refl-have-3sg happened doctors-the Subj. be-3 all of
 agreement
 'It happened that all doctors agreed.'
 [Watanabe 1993]

(39) Sa nimerit [să fie toți doctorii de accord]. **Romanian**
 refl-have-3sg happened Subj. be-3 all doctors-the of
 agreement
 'It happened that all doctors agreed.'
 [Watanabe 1993]

To summarize, in Romanian, lexical subjects are only
 licensed when Comp is full. The converse also holds: empty
 subjects (PRO or NP-trace) disallow Comp. The following
 sections demonstrate that the same generalization is true
 for other languages.

1.2.2.2 Modern Greek

Modern Greek invariably employs subjunctive complements in Control and Raising⁵. As in Romanian, in this language there is also a subjunctive particle (*na* in Greek), but unlike in Romanian, there is no Complementizer specific to Subjunctive clauses. Thus, we find that the only strategy available to fill Comp in Greek subordination contexts is to raise the subjunctive particle *na* together with the embedded predicate to Comp (V-I-C movement).

The pattern that we find in Greek is parallel to the one in Romanian. Lexical subjects are licensed when T-to-C movement has taken place (40). Again, T-to-C movement only takes place in complements of PC predicates and never in EC (where PRO is involved) (41) or in Raising (42).

- (40) I Maria theli na agorasi o Yiannis tin efimerida. **Greek**
 Mary want-3sg PRT buy-3sg John the newspaper
 'Mary wants John to buy the newspaper.'
 [Terzi 1997]

- (41) Ta pedhia arxisan [na trexoun]. **Greek**
 the children-NOM started-3pl Subj. Run-3pl
 'The children started to run.'
 [Alboiu & Motapanyane 2000]

- (42) I fitites fenonde [na δjavazun poli]. **Greek**
 the students seem-3pl Subj. read-3pl a lot
 'The students seem to study a lot.'
 [Roussou 2001]

Greek is a pro-drop language, and the presence of a null subject in the complement clause of a PC predicate

⁵ Unlike Romanian and other languages of the Balkan group, Greek has totally lost the infinitive.

(43) could in principle be PRO or pro. However, the distinct agreement markers on the matrix and embedded predicates indicate that the null subject is pro rather than PRO. In fact, the agreement markers of the matrix and embedded predicates must only match in EC contexts.

(43) Thelo [na mou grapsi kati]. **Greek**
 want-1sg Subj. me write-3sg something
 'I want her to write something.'
 [Rudin 1988]

That T-to-C movement has taken place in DP licensing is supported by the following facts: first, subjects are placed postverbally. Preverbal subjects are possible in embedded clause, but as in Romanian, only with a marked reading (44).

(44) ?O Yiannis theli [i Maria na figi]. **Greek**
 the John wants the Mary Subj. leave
 'John wants MARY to leave.'

Second, that the subjunctive particle (*na*) is in Comp is supported by the facts in Terzi (1991), who shows that *na* is incompatible with Complementizers like the Indicative *oti* (45) or with the conditional *if* (*an* in Greek) (47), which has extensively been argued to occupy Comp (Kayne 1990). However, *na* is compatible with *wh* words located in Spec CP (48). All examples are taken from Terzi (1991).

(45) O Yiannis theli (*oti) na fai. **Greek**
 the John wants Comp-Indic Subj. eat
 '(lit.)John wants that Subj. eat.'

(46) *John does not know if to eat.

(47) *O Yiannis den kseri an na fai. **Greek**
the John not knows if Subj. eat
'(lit.)John does not know if to eat.'

(48) O Yiannis den kseri pou na fai. **Greek**
the John not knows where Subj. eat
'John does not know where to eat.'

With object EC predicates, parallel to what we find in subject control, postverbal subjects (lexical or pro) are only licensed when T to C movement takes place, and only with PC predicates such as *persuade* (49). That the null subject in (49) is pro rather than PRO is signal by the possibility of distinct agreement markers in the matrix and embedded predicates. In contrast, postverbal subjects are banned with EC predicates such as *ask* (50). As expected, object control with EC predicates requires that the subject agreement markers must match in the matrix and embedded predicates (51-52), precisely because the subject is PRO rather than pro.

(49) sto telos ton episa [na fiyune pro]. **Greek**
at-the end him persuaded I Subj. leave-3pl
'At the end I persuaded him for them to leave.'

(50) *I Maria parakalese to Yianni [na diavasoun ta pedia].
the Mary asked John-ACC Subj. read-3pl the children-
NOM
'(lit.)Mary asked John for the children to read.'
[Terzi 1997]

- (51) I Maria parakalese to Yianni_i [PRO_i/*_k na divasi]. **Greek**
 the Mary asked John-ACC Subj. read-3sg
 'Mary asked John to read.'
 [Terzi 1997]
- (52) *I Maria parakalese to Yianni [na diavaso pro]. **Greek**
 the Mary asked John-ACC Subj. read-1sg
 '(lit.)Mary asked John that I read.'
 [Terzi 1997]

To summarize, in Greek *pro* or lexical DPs are only licensed when V-T-C movement has taken place, the only strategy available to fill C in subordination contexts in this language. Interestingly, this only happens in PC environments (both with subject and object Control predicates). In contrast, PRO and NP-traces only arise in the absence of V-T-C movement. This strongly supports that lexical subjects are licensed in CPs and PRO in bare TPs.

1.2.2.3 Arabic

Arabic is like Greek in many respects: first, it lacks infinitival clauses and employs subjunctive clauses with full agreement in the embedded predicate. Second, it also lacks a Complementizer specific for Subjunctive clauses. Third, it employs a subjunctive morpheme (?*an*) in the embedded inflection.

Turning now to where lexical subjects are licensed, as in Greek, lexical subjects are only licensed when V-T-C movement has applied in the embedded clause, i.e. when COMP

is full. Again, this only takes place with PC predicates, both with subject control (*refuse, agree, insist, wish, etc.*) as illustrated by (53) and object control predicates (*persuade, ask, etc.*), as in (54). That the null subject in such contexts is *pro* rather than *PRO* is signaled by the fact that it can be free in reference (55). Once more, the generalization is that lexical subjects/*pro* arise in CPs.

(53) rafada Zayd-un [*?an yarhal-a amr-un*]. **Arabic**
 refused-3sg Zayd-NOM Subj. leave-Subj-3sg amr-NOM
 'Zayd refused for amr to leave.'

(54) *?aqna-a Zayd-un_i amr-an_k [*?an y(OT?)arhal-a Hind-un_j*].*
persuaded-3sg Zayd-NOM amr-ACC Subj. leave-3sg Hind-
NOM
 '(lit.) Zayd persuaded amr for Hind to leave.'

(55) *?aqna-a Zayd-un_i amr-an_k [*?an yarhal-a pro_{i/k/j}*]* **Arabic**
persuaded-3sg Zayd-NOM amr-ACC Subj. leave-3sg
 '(lit.) Zayd persuaded amr to leave/someone else to
 leave.'

1.2.2.4 Italian, some Italian dialects and European Portuguese

Let us consider another set of languages that involve movement of some verbal element to Comp. All instances support the idea at hand: regardless of the finite or infinitival nature of the embedded clause, lexical subjects are licensed within CPs, and *PRO* in complements that are TPs.

Starting with Italian, according to Rizzi (1982) postverbal subjects are assigned Nominative Case when Aux-to-Comp movement has taken place in infinitival or gerundive clauses, i.e., when Comp is full. This is illustrated in (56-57) below:

(56) Suppongo[non esser la situazione suscettibile di
I-suppose not-to-be the situation susceptible of
ulteriori miglioramenti].
further improvement
'I suppose that the situation is not susceptible to
further improvement.'

(57) *Suppongo[*la situazione* non esser suscettibile di
I-suppose not-to-be the situation susceptible of
ulteriori miglioramenti].
further improvement
'I suppose that the situation is not susceptible to
further improvement.'

Support for the claim that the Aux in (56) is in Comp is provided by two observations: First, the fact that in conditional clauses, *if* (*se* in Italian) is incompatible with a raised Auxiliary (58-59). Second, that the order that we find is [Auxiliary DP].

(58) [Avesse lui capito al volo], tutto sarebbe andato bene.
Had he understood at flight, all would-be gone well
'If he had understood at once, all would have gone well.'

(59) *[Se avesse lui capito al volo], tutto sarebbe andato
If had he understood at flight, all would-be gone
bene.
well
'If he had understood at once, all would have gone well.'

Salentino employs subjunctive complements in PC contexts and Infinitivals in complements of EC predicates. As EC involves a PRO subject, we expect that whatever strategy that licenses lexical subjects only applies to PC contexts, and not to EC. As expected, Salentino displays postverbal lexical subjects in PC contexts, where the embedded subject appears postverbally after the Complementizer plus the verb cluster [Ku verb] (60). In fact, nothing can break the adjacency between particle KU and the predicate⁶ (61).

(60) Oyyu ku bbene lu Maryu krai. **Salentino**
 Want-1sg that come-3sg the Maryu tomorrow
 'I want Maryu to come tomorrow.'
 [Calabrese 1992]

(61) *Oyyu ku lu Maryu bbene krai. **Salentino**
 Want-1sg that the Maryu come-3sg tomorrow
 'I want Maryu to come tomorrow.'
 [Calabrese 1992]

European Portuguese licenses lexical subjects in inflected infinitives. Raposo (1987) makes a parallelism between some instances of European Portuguese (EP) inflected infinitives and the Aux-to-Comp Italian cases discussed above. He notes that the contexts in which both phenomena arise in the languages are strikingly similar.

⁶ Interestingly, Salentino also allows preverbal subjects. See Calabrese (1992) for details.

Consider the asymmetry of lexical subject licensing in European Portuguese in (62-63). These examples show that lexical subjects are only licensed in postverbal positions in embedded inflected infinitival clauses. The fact that the subjects appear postverbally suggests that in such instances T has raised to C. Raposo argues that the reason for the verb movement in (62) is that embedded INFL needs to be governed and Case marked from the matrix predicate in order to be able to assign Nominative Case to the embedded subject. This implies a general Infl-to Comp process rather than the restricted Aux-to-Comp in Italian, but the general idea holds: lexical subjects are licensed when Comp is full.

- (62) O Manel pensa [terem os amigos levado o livro]. **EP**
 the Manel thinks to-have-3.pl the friends taken-away
 the book
 'Manel thinks that the friends had taken away the book.'

[Raposo 1987]

- (63) *O Manel pensa [os amigos terem levado o livro]. **EP**
 the Manel thinks the friends to-have-3.pl taken-away
 the book
 'Manel thinks that the friends had taken away the book.'

[Raposo 1987]

Southern Italian dialects⁷ are of special interest with respect to lexical subject licensing in infinitival

⁷ See Ledgeway (2000) for a Minimalist approach to the syntax of southern Italian dialects.

clauses. In Sardinian, for example, Control predicates invariably select for bare infinitives, but only PC predicates allow for postverbal subjects (64-65). That lexical subjects appear postverbally suggests that the verb has moved to Comp. In short, as expected, lexical subjects are licensed when Comp is full. Turning to the Logudorese-Nuorese dialect of Sardinian, rather than bare infinitives as in Sardinian, we find inflected infinitival clauses similar to the ones found in Portuguese in PC contexts. Crucially, it also allows for postverbal subjects only where the verbal cluster has moved to Comp. The embedded null subject in PC contexts is arguably *pro* rather than *PRO*, since distinct subject agreement markers are allowed in matrix and embedded predicates (67).

(64) Su pitzinnu est provande [a dormire]. ***Sardinian***
 'The boy is trying to sleep.'
 [Allan Jones 1992]

(65) Non Keljo [a cantare tue]. ***Sardinian***
 'I do not want you to sing.'
 [Allan Jones 1992]

(66) Non Keljo [a cantares tue]. ***Logudorese-Nuorese***
 Neg want-1sg to sing-2sg you
 'I do not want you to sin'

(67) Non keljo [a cantaren pro]. ***Logudorese-Nuorese***
 Neg want-1sg to sing-3pl they
 'I do not want them to sing'
 [Allan Jones 1992]

To summarize, Italian and European Portuguese provide additional evidence that (i) finiteness is irrelevant in lexical subject licensing and (ii) lexical subjects are licensed when C is filled by whichever strategy that is available in the language.

1.2.2.5 For-to in INFL vs. For in Comp. Some comparisons.

In this section I will cover languages that contain certain particles whose categorial status has been controversial between Infl or Comp. Again, descriptively speaking, it seems that lexical subjects are invariably licensed only when Comp is full.

Hoebeker (1975), De Vriendt (1978) and Haegeman (1986), among others, have attested that several Flemish dialects of Dutch display Nominative Subjects in Infinitival clauses, which are introduced by what looks like prepositions. Additionally, these complements include an infinitival *te* marker. Both PRO and lexical subjects are allowed in these Infinitival clauses (68-69). At first sight, this suggests that PRO and lexical subjects are licensed in parallel structural conditions.

- (68) [Voor *gie* da te krygen] goaje vele moeten ***Flemish***
 for you that to get go-you a lot must
 veranderen.
 change
 'In order to get that you will have to change a lot.'
 [Haegeman 1986]
- (69) dan-k proberen [voor PRO weg te gaan]. ***Flemish***
 that-I try for PRO away to go
 'that I try to go away.'
 [Haegeman 1986]

Interestingly, Haegeman (1986) provides evidence that, contrary to Control complements to EC predicates like *try*, which only license PRO, infinitival clauses that license lexical subjects with Nominative Case are CPs. Specifically, a Focus marker (*tet*), which usually attaches to Comp, is only allowed in infinitivals with specified subjects but not in infinitivals with PRO.

The Flemish data above are strikingly similar to the Belfast English data discussed in Henry (1987), in the sense that the string [Voor...te] (*for...to* in Belfast English) is found when both PRO and when lexical subjects are licensed. However, Henry concludes that *for* is a Complementizer and not part of INFL when it occurs with lexical subjects.

Let us consider the data in Belfast English more closely. The generalization is that Raising, ECM, EC and PC predicates take *for to* complements but, as expected, only

PC predicates license lexical subjects. All examples are taken from Henry (1987).

- (70) John tried [*for to win*]. EC
- (71) John seems [*for to be happy*]. Raising
- (72) I wanted John [*for to win*]. ECM
- (73) I wanted very much [*for John to win.*] PC

The ECM status of (72) is supported by the fact that there is an adjacency requirement between the matrix predicate and *John*, as (74) shows:

- (74) *I wanted very much John *for to win*.

For has been claimed to have a double status in Belfast English (Henry 1992), as part of the inflectional cluster in Raising, ECM and EC but, crucially, as a Complementizer in PC contexts where lexical subjects are licensed. Evidence for the idea that *for* raises from INFL to COMP in PC is provided in (75), where doubling of *for* results in ungrammaticality:

- (75) *I wanted very much [*for John for to win*]. **Belf. Engl.**

Turning now to the Flemish data, it is plausible that, parallel to Belfast English, Flemish *Voor* is in Comp when lexical subjects are licensed, but in INFL in EC contexts. If this is correct, both Flemish and Belfast English provide evidence that lexical subjects are licensed when Comp is full and conversely, PRO when there is no Comp. A

similar proposal has been suggested for Standard English *for-to* constructions by Watanabe (1993), which was later adopted by Boskovic (1997). Watanabe (1993), following a suggestion by Chomsky, proposes that in a sentence like (76) below, *for-to* is base generated under INFL and that *for* raises to Comp. If this is correct it provides further support in favor of the idea that, in this context, lexical subjects are licensed by the INFL to COMP process, i.e., when Comp is full.

(76) John wants for Mary to leave the party.

Considering the facts about *for-to* complements, there is some dialectal variation in English that is worth mentioning. Interestingly, different dialects of English differ with respect to the possibility of certain predicates taking *for-to* complements with lexical subjects. For instance, predicate *try* does not take [*For DP to*] complements in Standard English (77), Belfast English or the Ottawa Valley English. However, Ozark English does allow (78). This suggests that predicate *try* in Ozark, much like in Spanish and unlike in standard English, belongs to the PC class⁸.

⁸ This is not surprising, since unlike other EC predicates, which universally display EC properties, predicate *try* shows great variation in its properties as EC or PC across languages.

(77) *John tried for Bill to learn the problem. **Stand. E.**

(78) John tried for Bill to learn the problem. **Ozark E.**

Crucially, Carroll (1983) points out that, despite the great variation, 'there are no reported dialects that permit the Complementizer and disallow an overt subject and no reported dialects that disallow *for* but do have an overt subject.' This conforms to the generalization in this chapter that lexical subjects appear in the presence of Comp.

English based Creole languages are worth considering in this section because they are in the process of developing a Complementizer system. It has been argued that the development into Creole languages should involve the same process of language change as other natural languages do, i.e., the changes should be within the realm of possibilities allowed by Universal Grammar. One natural change found in languages undergoing creolization is the appearance of embedded subordinating clauses and the development of the Complementizer system.

In accordance with what we have seen so far, we would expect that lexical subjects are only licensed in the presence of a Complementizer when the Complementizer has been developed. Consider the case of Haitian Creole attested in Koopman and Lefebvre (1981). They argue that

Complementizer *pu* has two sources, one a preposition (which nowadays introduces final clauses) and the other the modal particle, both homophonous to the present day

Complementizer *pu*. The Complementizer that derived from the modal introduces complements of predicates like *want*, *tell*, *decide*, *ask*, *promise*, *wish* and *believe*, all PC predicates.

(79) and (80) exemplify the Modal and Complementizer uses of *pu* respectively.

(79) m pu ale lekol. **Haitian creole**
 I MODAL GO school
 'I have to go to school.'

(80) yo te vle pu m t âtre nâ trup šakmél. **Haitian creole**
 They PAST want COMP I PAST join in troops Jackmel
 'They wanted me to join the troops of Jackmel.'

Koopman and Lefebvre propose that Modal *pu* has lost its modal meaning of obligation and has historically left the INFL position for COMP. Evidence for this change comes from the fact that *pu* can co-occur with the modal main verb *must* only when *pu* is in COMP, not when *pu* is a modal marker (i.e., not when it is in INFL). The historical change is supported by the frequency changes in the use of *pu* as a Complementizer. Whereas there was no reported use of *pu* as COMP in Sylvain (1936), in Hall (1953) we find a strong tendency for *pu* in COMP. Interestingly, and in contrast to the Modal use of *pu*, we find that all *pu*-s in COMP are followed by lexical subject. This conforms to the general

pattern that I expect: lexical DPs are licensed in the presence of Comp.

1.2.2.6 Scandinavian languages

Let us next look at Scandinavian languages. The interest comes from the fact that there is controversy as to the status of certain markers as being part of INFL or COMP. Consider the comparison between Icelandic and Norwegian in this respect. Among others, Thráinsson (1993) attests that in Norwegian, the infinitival marker *å* appears in Control and ECM/Raising whereas finite clauses are introduced by *at*. In contrast, in Icelandic, the infinitival marker *að* appears both in Finite and Control complements (but never in ECM or Raising). The question arises whether Icelandic *að* is a Complementizer or an Infinitival marker, since it introduces both Finite clauses with overt lexical subjects and infinitival clauses with PRO.

In order to be consistent with the claim in this chapter, we would expect that lexical subjects are licensed when *að* is in Comp, and conversely, PRO should be licensed when *að* is in INFL.

(81)

	Finite	Control	ECM	Raising
Icelandic	að	að	Ø	Ø
Norwegian	at	å	å	å

One asymmetry found between Finite and Infinitival complements in Icelandic reveals that Icelandic also conforms to the pattern attested in previous section. Evidence comes from Topicalization, which is allowed in finite complements (82) but not in Control (83) (Thráinsson (1993)). Let us elaborate on this. It has been suggested that Focus in Icelandic follows Comp (it is placed in [spec TP] according to Thráinsson (1992) or in a special Focus projection between CP and [Ags SP] (Bobaljik and Jonas 1992)). Thráinsson (1993) takes the asymmetry in (82-83) to be proof that Control predicates do not take CPs in Icelandic and that að is not in C in Control. Conversely, the possibility of having topics after að in Finite clauses provides evidence that að is in C. If this is correct, again we find that lexical subjects are licensed only when að is in Comp, namely, when Comp is full, and PRO in bare TPs.

- (82) Risanrir segja [að á morgun_j éti þeir *Icelandic*
the-giants say that to-morrow eat they
ríkisstjórnina t_j]
the government
'The giants say that tomorrow they will eat the
government.'
- (83) *Risanrir lofa [að á morgun_j éta ríkisstjórnina t_j]
the-giants promise to to-morrow eat the government

1.3 Summary

The inquiry into crosslinguistic data strongly suggests that lexical subjects are invariably licensed in CPs and that PRO appears in TPs. Regardless of the finite or infinitival nature of the clause involved, whatever strategy that the language has for filling Comp invariably correlates with lexical subject licensing. On the other hand, the null subject in EC (PRO) arises only when there is no Comp involved. Two types of evidence have been provided supporting the latter throughout the thesis: first, section 3.2. of chapter 3 showed that Raising and EC involve identical complement types, namely TPs. Second, in this section, we have seen that EC avoids any of the strategies available in the language for filling Comp. The descriptive generalization that this section has reached can be stated as in (84) below.

- (84) In complement clauses, lexical subjects arise in CPs, whereas PRO is licensed in bare TPs.

2 The contribution of Comp to the system.

In chapter 3 I concluded that Raising involves a more defective T than Control T. Specifically, Raising T is Defective because it is [-T], whereas Control T is [+T]. I also concluded that PRO is assigned regular Case by [+T]. That PRO is assigned regular Case suggests that the complementary distribution between PRO and lexical subjects cannot be Case related. Below I argue that Comp, which is only present in lexical subject licensing, is endowed with a [person] feature. The [person] feature renders the T Probe Complete. In other words, apart from the [+T] feature, T also contains the [person] feature. The identification of [person] in T provides an explicit typology of different types of T. Raising T is [-T, -person] (Defective-T), Control T is [+T, -person] (Partial-T) and T in lexical subject licensing is [+T, +person] (Complete-T).

2.1 Recapitulation: Raising, PRO and lexical subjects

One important contribution of this thesis is, in my view, that PRO receives regular Structural Case, as shown by the data in Chapter 3 section 5. This suggests that, contra the Movement analysis of Control in O'Neil (1997) and Hornstein (2001), Control should be distinguished from

Raising. In chapter 3, sections 3.2. and 4 I have defended the view that (i) both Raising and EC arise in TP complements, and that (ii) the distinguishing feature between the two is the [+/-T] feature of the embedded T. Specifically, I have suggested that embedded T, by virtue of being [+T], assigns Case in Control, but not in Raising, because the latter is specified as [-T]. This explicitly captures the standard idea that Raising T is more defective than Control T.

Turning now to the distribution of PRO and lexical subjects, if all there is to their distribution is the requirement to satisfy Case, we are left without an explanation of why DPs and PRO are in complementary distribution. A first descriptive pattern that may shed some light to this issue was identified in the previous section, repeated in (85) below:

- (85) In complement clauses, lexical subjects arise in CPs, whereas PRO is licensed in bare TPs.

If Comp is relevant in licensing lexical subjects and in disallowing PRO, we need to determine what the precise contribution of Comp to the system is. Notice that there is no situation where we find a clear Comp and a [-T] T. Thus, I assume that if the presence of Comp involves some feature, it will arguably somehow render T with a richer

content than the mere [+T]. The identification of the feature contained in Comp will allow us to make the typology of T-s in subordination contexts explicit. The chart below summarizes the discussion:

(86)

Type of subject	Nature of T	Presence of Comp
NP-trace	[-T]	NO. [-T, -?]
PRO	[+T]	NO. [+T, -?]
DP	[+T]	YES.[+T, +?]

2.2 Basque and Comp [person]

The Basque infinitival paradigm analyzed in chapter 3, section 5.1. will help us determine the precise contribution of Comp in licensing lexical subjects. Recall that there is an interesting asymmetry in infinitival complements in Basque: only embedded clauses that are marked with structural Case license lexical subjects (or pro) in the subject position of the embedded clause (87-88). Also, when the embedded clause is marked with structural Case, the matrix predicate displays agreement not only with matrix nominals, but also with the embedded clause as a whole (3-Absolutive). In contrast, EC predicates take complements marked with inherent Case, and

only license PRO. In such instances, the matrix Auxiliary displays no agreement with the embedded clause (89-90).

These correlations are stated in (91).

(87) [John-E.....[DP...v...]-A...decide....Aux(3A-3E)]

(88) [John-E..you-D.[DP...v...]-A..recommend..Aux(3A-2D-3E)]

(89) [John-A.....[PRO..v...]......try.....Aux(3A)]

(90) [John-E you-A.[PRO..v...]......send....Aux(2A-3E)]

(91) PRO is licensed in clauses NOT marked with Structural Case, whereas DPs are licensed in clauses marked with Structural Case.

That the matrix Auxiliary displays agreement only with those clauses that are marked with Structural Case (87-88) is not surprising. As San Martin and Uriagereka (2002) note, there is a widely attested correlation whereby predicates only display person agreement with elements that are marked with structural Case, not with inherently Case marked arguments. Although the correlation between Structural Case and the person system is well attested, it remains to be understood why and how the system uses this difference between Structural Case/person system vs. Inherent Case/no person system. For our purposes, we can say that Comp, by virtue of containing a Structural Case, includes a [person] feature in it in Basque. From this, we may conclude that the contribution of Comp to the system in

Basque is that it endows the local T-Probe⁹ with [person], rendering T Complete, i.e., [+T, +person]. Since there is no Comp in licensing PRO, it is reasonable to suppose that T in such instances is [+T, -person]. This claim about the contribution of Comp to the system enables us to explicitly describe the nature of the T-Probes involved in Raising, Control and Lexical subject licensing in Basque:

(92)

	T	Presence of C	Nature of T
NP-trace	[-T]	NO [-person]	Defective [-T, -p]
PRO	[+T]	NO [-person]	Partial [+T, -p]
DP	[+T]	YES [+person]	Complete [+T, +p]

The question is whether we can extend this proposal to other languages. One option is to suggest that, parallel to the Basque instances, all embedded clauses that license lexical subjects are Case marked with Structural Case. This is plausible in clausal gerunds that license lexical subjects, as discussed in Pires (2001), which are forced to move under passivization.

⁹ See chapter 1 section 2.3. where I briefly present Chomsky's (2000, 2001) Agree mechanism involving Probes and Goals.

(93) I prefer [John reading the book].

(94) *It is expected [John reading the book].

(95) [John reading the book] was preferred.

However, Pires (2001) argues that Clausal gerunds are best represented as TPs rather than CPs for two reasons: first, they disallow Complementizers in the embedded clause and second, short wh-movement to the embedded [spec CP] is disallowed. Nevertheless, the fact that Clausal gerunds may appear either in subject (96) or object position (97) strongly suggests that the clause itself is marked with Case. Since the Case marking is on the entire clause, it is reasonable to assume that Case is in the periphery of the clause, probably in Comp, as in Basque. If this is correct, clausal gerunds that license lexical subjects should also have a Comp that contains a [person] feature.

(96) [His leaving the party so early] was a surprise.

(97) I prefer [his leaving the party]

Conversely, we expect that, parallel to Basque EC instances, clausal gerunds that are complements of Exhaustive Control predicates do not contain Comp [person] because they are not marked with Case. The impossibility to passivize the clausal gerund itself in these instances (100) suggests that it needs no Case, which, in present terms, would indicate that T is [+T, -person].

- (98) John tried/avoided/started [PRO taking to Mary].
(99) *John avoided/tried/started [Peter talking to Mary].
(100) *[PRO talking to Mary] was avoided/tried/started.

Notice that a parallel assumption can be made about inflected infinitivals in Portuguese (see section 1.2.2.4), which license lexical subjects internally and only appear in Case marked positions according to Raposo (1987).

Finally, support for the idea that Comp bears a [person] feature where lexical subjects are licensed comes from the extensive literature that corroborates that (i) some [person] feature related to point of view is involved in the periphery of clauses and (ii) in some languages Complementizers display agreement morphology with the subject itself as well as with the predicate (for dialects of German and Dutch see Bayer (1984), for West Flemish see Bennis and Haegeman (184) and Haegeman (1990, 1992) and for Irish see McCloskey (1992a)). The fact that Comp is placed in the periphery indicates that postulating a [person] feature in it is on the right track, and that the specific contribution of Comp to T is that it endows T with a [person] feature.

To summarize, I have suggested that Comp involves a [person] feature that renders T a Complete Probe with the feature specification [+T, +person]. The scale of

defectiveness of T found in Raising, PRO and lexical subjects can then be completed as follows:

(101)

Type of subject	Nature of T
NP-trace	Defective [-T, -person]
PRO	Partial [+T, -person]
Lexical subject	Complete [+T, +person]

The chart above shows that the intuition that different degrees of defective Ts exist is correct. No -positive- feature is less complete than one -positive- feature and in turn, two -positive- features is more complete than only one positive feature. Thus, we may call Raising T 'Defective T', Control T 'Partial T', and T in licensing lexical subjects 'Complete T'.

2.3 Two relevant questions

Case and the [person] feature seem to be the crucial ingredients that are involved in licensing PRO and Lexical subjects. As for the complementary distribution of PRO and lexical subjects, we know that the explanation cannot be related to Case. By virtue of being [+Tense] both Partial T and Complete T assign regular Case to PRO and lexical subjects, respectively. After determining that the distinguishing feature between Partial T and Complete T is

the presence/absence of the [person] feature, the question is how this [person] feature contributes to the system so that PRO is only allowed with Partial-T and lexical subjects only with Complete-T. Notice that a complete understanding of the distributional problem will only be reached when we answer two distinct questions, namely those stated in (102-103) and illustrated by the examples in (104-107). The next chapter will present a theory of EC, which includes an answer to (102-103).

(102) Why is Partial T compatible with PRO (104) but incompatible with lexical subjects (105)?

(103) Why is Complete T compatible with lexical subjects (106) but incompatible with PRO (107)?

(104) John tried [PRO T-Partial to kiss Mary].

(105) *John tried [he T-Partial to kiss Mary].

(106) John said [that he T-Complete kissed Mary].

(107) *John said [that PRO T-Complete kissed Mary].

CHAPTER 5: PRO AS LAST RESORT

This chapter presents a Theory of Control. In terms of the distribution of PRO, I will specify why Partial-T is only compatible with PRO (and not with lexical subjects) (section 1), whereas Complete-T exclusively correlates with lexical subject licensing (section 3). Within the distributional issue, I will also address the question of why only subjects can be controlled (section 4). Very briefly, the interpretation of PRO is the consequence of the fact that the Chain of PRO must literally collapse with the Chain of the antecedent at LF in order to survive at this interface. The details will be made explicit in section 2.

1 Why Partial-T is compatible with PRO but incompatible with lexical subjects

This section provides an answer to question of why Partial T is compatible with PRO but incompatible with Lexical subjects. The answer will be straightforward once we analyze some aspects about the nature of the elements involved (PRO and lexical subjects) together with the notion Binding Domain stated in Minimalist terms. Specifically, I will argue that Partial-T prevents the definition of a Domain for Binding. Since, unlike lexical

nominals, PRO is a featureless element in the sense that it has no [person] or Binding features (i.e., it is not +/-anaphoric or +/-pronominal), I suggest that PRO is compatible with Partial T precisely because it has no need to meet any Binding requirements. In contrast, lexical subjects are incompatible with Partial-T because, in the absence of a Domain, they cannot meet their Binding requirements and, as a result, the derivation cancels.

It is a fact that all arguments but PRO have a minimal [person] feature. Pronouns and anaphors are themselves inflected for person and Names are invariably third person singular or plural. In contrast, there is no evidence that PRO has any features per se. Moreover, there is evidence that at least in one language, namely Hebrew, PRO has no [person] features. The argument goes as follows: in Hebrew, 3rd person null subjects (pro) are banned from all contexts except from controlled environments (Landau, forthcoming). Following Ritter (1995), Shlonsky (1997) suggests that in Hebrew, in contrast to 1st and 2nd null subjects, which contain a [person] feature, 3rd person pronouns do not contain a [person] feature. Assuming that pro is endowed with [person] features, the fact that 3rd person null subjects are banned from all contexts except from controlled positions suggests that the null subject in such

instances is PRO rather than pro, and that PRO does not have [person] features.

In terms of the Binding properties, I will argue that PRO has no Anaphoric or Pronominal features either. The evidence comes from Binding Theory. To start with, in Binding Theory it is the feature composition of the element itself that determines the requirement that the element must meet in a given Domain. For instance, Anaphors are [+A, -P] and hence must be bound in its Governing Category. Conversely, Pronouns are [-A, -P] and must be free in their Governing Category, where Governing Category is defined as in (1).

- (1) Governing Category: the Governing Category of A is the Minimal Domain containing it, its governor and an accessible subject/SUBJECT
Accessible subject/SUBJECT:
Subject: NP in [Spec, XP]
SUBJECT: AGR.
Accessible subject/SUBJECT: A is an accessible subject/SUBJECT for B if the coindexation of A and B does not violate any grammatical principles.

In GB it was the feature composition of PRO as being simultaneously [+A, +P] that derived the fact that PRO had to appear in Ungoverned Positions (The PRO-Theorem). More specifically, PRO is anaphoric in OC (2) and pronominal in NOC (3). Thus, it was assumed that PRO was simultaneously [+anaphoric] and [+pronominal]. The only possibility in which it could meet these contradictory binding

requirements was by not having a Domain. No doubt that the feature composition of PRO as being simultaneously [+A, +P] was not entirely justified, but it derived the empirical facts correctly.

(2) He_i tried [PRO_i to abandon the investigation].

(3) [PRO_{arb} to abandon the investigation] would be regrettable.

Lasnik and Uriagereka (forthcoming) argue that the notion Domain in Binding can be successfully redefined in Minimalist terms by replacing the notion Government with Probe. The definition is provided in (4):

(4) X is the Binding Domain D for Y iff X is the minimal maximal projection which includes Y and Z, where Z is Y's Probe.

Interestingly, the distribution of PRO in GB and in the new Minimalist proposal in Lasnik and Uriagereka provides rather similar results. Technically, in GB, PRO in a sentence like (5) was not governed because Infinitival INFL was not considered a proper governor of PRO, and neither was the matrix predicate, because there was assumed to be a CP barrier that prevented outside Government of PRO.

(5) John tried [_{CP} PRO to bake a cake].

Turning now to the minimalist definition of Domain in (4), PRO does have a Probe with which it establishes a

(6) John tried [T-Partial.....PRO bake a cake].
 (Probe) (Goal)
 |_____||

(7) [John.....T_{<complete>}...v [TP ...T_{<partial>}...PRO.....]]

Minimality violation

181

following question: if it is the feature composition of elements that determines the Binding condition that each element must meet, we must wonder what the feature composition of PRO might be that renders PRO possible in that position. The GB trick of considering PRO as [+A, +P] should be discarded. The reason is that, although PRO might appear in two distinct environments, one being [+A] and the other [+P], there is no reason to believe that PRO has both features simultaneously. One plausible alternative is that PRO does not have a Domain for Binding because it has no Binding Condition to meet. From this we may conclude that PRO does not have anaphoric or pronominal features¹. The final conclusion of this section is that PRO does not have any phi, anaphoric or pronominal features.

To conclude, notice that GB straightforwardly explained that no lexical counterpart of PRO can exist. In particular, all phonetically null elements but PRO have a lexical counterpart. This had a straightforward explanation: the lexical element would be Caseless and it

¹ Uriagereka (p.c.) notes that the question for my proposal is whether the logical possibility [+anaphor, +pronominal] in a binary system such as Binding theory does not exist, and if it does not, why.

would violate the Case Filter². However, if, as I am suggesting in this thesis, PRO does not have any anaphoric or pronominal features, the question of why no lexical counterpart of PRO exists cannot be addressed in Binding Theoretic terms³. I will return to this issue in section 2.

To summarize, in this section I have suggested that PRO has no features. First, it has no phi-features per se. Second, PRO has no Binding Domain in the Minimalist version of Domain provided in Lasnik and Uriagereka, which suggests that PRO has no Anaphoric or Pronominal Features. At this point we do have an answer to the first question in (102), namely why, unlike PRO, lexical subjects are incompatible with Partial T. PRO is compatible with Partial T because,

² Consider the problem that arises for GB with the hypothesis that Romance SE may be the lexical counterpart to PRO. Parallel to PRO, it appears in a Caseless position, as shown by (i), an indication that, like PRO, it needs no Case. However, SE is not licensed in the position of PRO (ii).

- (i) Juan se comio una manzana.
 Juan-NOM SE ate one apple-ACC
 'Juan ate an apple.'
- (ii) *Juan intentó [hablarse con Maria]
 Juan-NOM tried speak-SE with Maria
 'Juan tried to talk to Mary.'

³ Note that Lasnik and Uriagereka's proposal encounters a problem in this respect. They suggest that PRO is [+anaphoric, +pronominal] and that it receives Null Case. Thus, the inexistence of a lexical counterpart to PRO cannot be attributed to the fact that the position is a Caseless position, and the question of why an overt counterpart to PRO that receives Null Case does not exist remains unexplained.

although Partial T prevents the definition of a Domain, PRO does not need one. In contrast, notice that all elements but PRO have certain Anaphoric and/or Pronominal features, which amounts to saying that they have some Binding Condition to meet in a Domain. However, in view of the fact that Partial T does not define a Domain, we may conclude that all nominals except PRO are incompatible with Partial-T precisely because they are unable to meet their Binding requirements in this context. In other words, Binding Theory would be violated and the derivation would cancel. Notice that the reason why PRO is not compatible with Complete T cannot be explained in the same terms. Complete T does define a Domain for Binding, but we know that PRO does not need one. In other words, no violation of Binding Theory occurs in such instances. In section 3 I will argue that PRO and Complete T are not compatible for independent reasons that have no relation to Binding Theory.

2 PRO as Last Resort

In the previous sections I have claimed that PRO is a featureless element, and as such, it does not need to satisfy any Binding Condition. At this point, several questions arise. These are listed in (8-11). This section deals with questions (8-9). (10) will be addressed in

section 3, and finally, section 4 will answer question (11).

- (8) Why does the system need a featureless element like PRO?
- (9) How is the Control effect derived?
- (10) Why is Complete T compatible with Lexical subjects but incompatible with PRO?
- (11) Why can only subjects be controlled?

2.1 The existence of PRO.

I have suggested that PRO does not have [person] or anaphoric/pronominal features (section 1). In fact, there is no evidence that PRO has any features per se. The question is why the system needs PRO and how the system makes use of it.

Starting with the question of why the system needs PRO, once we discard the movement analysis of PRO that suggests that Theta Roles are Features (see Chapter 3), the answer is that PRO is necessary to meet the Theta Criterion. PRO enters the derivation to satisfy the Theta Role of the embedded predicate. More specifically, I will suggest that PRO is an Expletive-like element that is inserted as Last Resort, to avoid crashing in Theta-Theoretic terms. In other words, PRO is not in the Numeration and is inserted into the derivation off-line

only to satisfy the Theta Criterion when no more DPs are available in the Numeration.

That PRO is not in the Numeration is reasonable. Consider what we know about the Lexicon. The Lexicon is a list of Lexical items, and Lexical Items are pairings of sound and meaning. In other words, the items in the Lexicon contain certain features. In contrast, I have suggested that PRO is featureless: it has no phi or binding features. It does not have phonetic features either. This implies that PRO cannot be in the Numeration precisely because it is featureless. If PRO is not in the Numeration but nevertheless participates in the derivation, the only alternative left is to suggest that PRO enters derivationally, off-line.

The following section illustrates how the system I am proposing works in a derivation of subject control and another involving object control.

2.2 Some Derivations

Consider how the system works in sentence (12), which displays subject control.

(12) John_i tried [PRO_i to eat cheese].

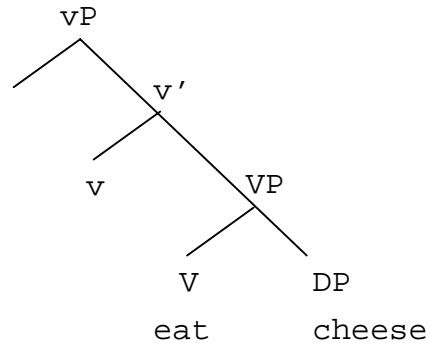
For building (12) the Numeration includes (13).

(13) {John-NOM, T, v, tried, v, eat, cheese-ACC}

Suppose that we select the Sub-Numeration in (14) and we build the corresponding structure in (15):

(14) {v, eat, cheese-ACC}

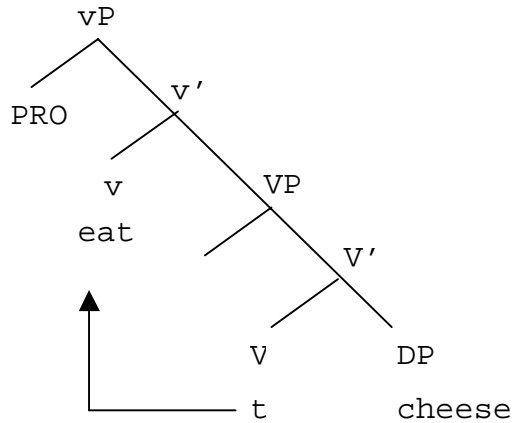
(15)



Assuming that the Theta Criterion holds, and in view of the fact that there is no other element in the Numeration that can saturate the external theta role of predicate *eat*, PRO is inserted off-line in [spec, vP], as represented in (16). Notice that other elements in the literature have been proposed to be entered the derivation off-line. For example, Davis (1984) introduced real pleonastics this way. Uriagereka (1988) suggested this idea for Romance SE, which later Martin (1996) adopted for PRO. Lately, Lasnik and Uriagereka (forthcoming) have proposed the off-line insertion of Do in Do-support as Last Resort. This indicates that the system does permit off-line

elements, i.e. insertion of elements that are not in the Numeration.

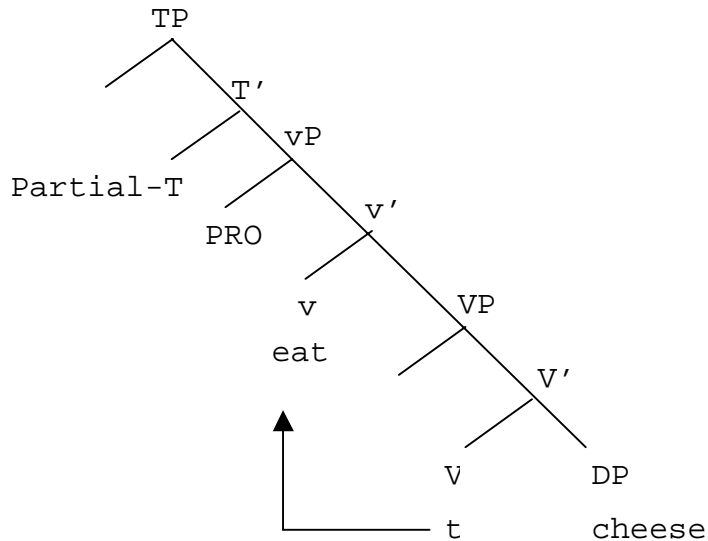
(16)



With regards to Case, according to this thesis, PRO appears in a Case assigning configuration. However, in a nutshell, I suggest that, although PRO appears in a Case assigning configuration, it is unable to host a Case Value because of its defective morphological feature make-up (I separate assignment and hosting abilities here, a distinction that I will elaborate below). As such, making the standard assumption that LF is a collection of Chains, the Chain of PRO violates FI at this interface. However, a Chain collapse to the nearest local Chain, in the sense of Martin (1996), may come to rescue, yielding as a result the phenomenon of Control (the mechanics of Chain collapse will be elaborated on below). Let us analyze this idea step by step.

First, continuing with the derivation in (16) we construct the TP layer by selecting Partial T from the Numeration, as in (17):

(17)



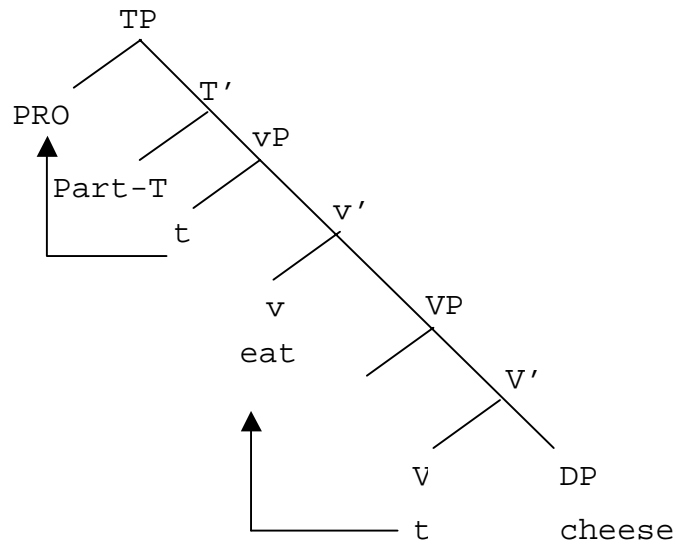
Assume that Case assignment and Hosting be separate, each carried out under the following conditions:

- (18) X is a proper configuration of Case assignment for Y iff X includes an appropriate Probe for Y.
- (19) Goal Y can host the corresponding Case Value iff Y has the right morphological Feature make-up.

According to (18-19), Partial T, by virtue of being [+T] involves a proper, indeed regular, Case assigning configuration in (17), whereby PRO is assigned Case. However, PRO has a null morphological feature make-up in two respects. First, it is Φ -defective (Martin 1996 and section 1 above) and second, it has no Anaphoric or

Pronominal features (see section 1). By (19), we conclude that PRO cannot host the Case Value assigned by [+T]. However, presumably by the EPP feature in Partial T, PRO raises to [Spec TP] as in (20), which creates a Chain headed by PRO.

(20)



Notice that a similar distinction between Assignment and Hosting was already present in Chomsky (1986). In particular, Chomsky separated Case Assignment from Case Realization. Case Assignment took place in D-Structure, whereas Case Realization was related to S-Structure. For example, for sentences like (21-22) Case is invariably assigned to the complement, as represented in (23), but may either be realized by the genitive marker in subject position (24) or by the Complementizer *of* in complement position (25).

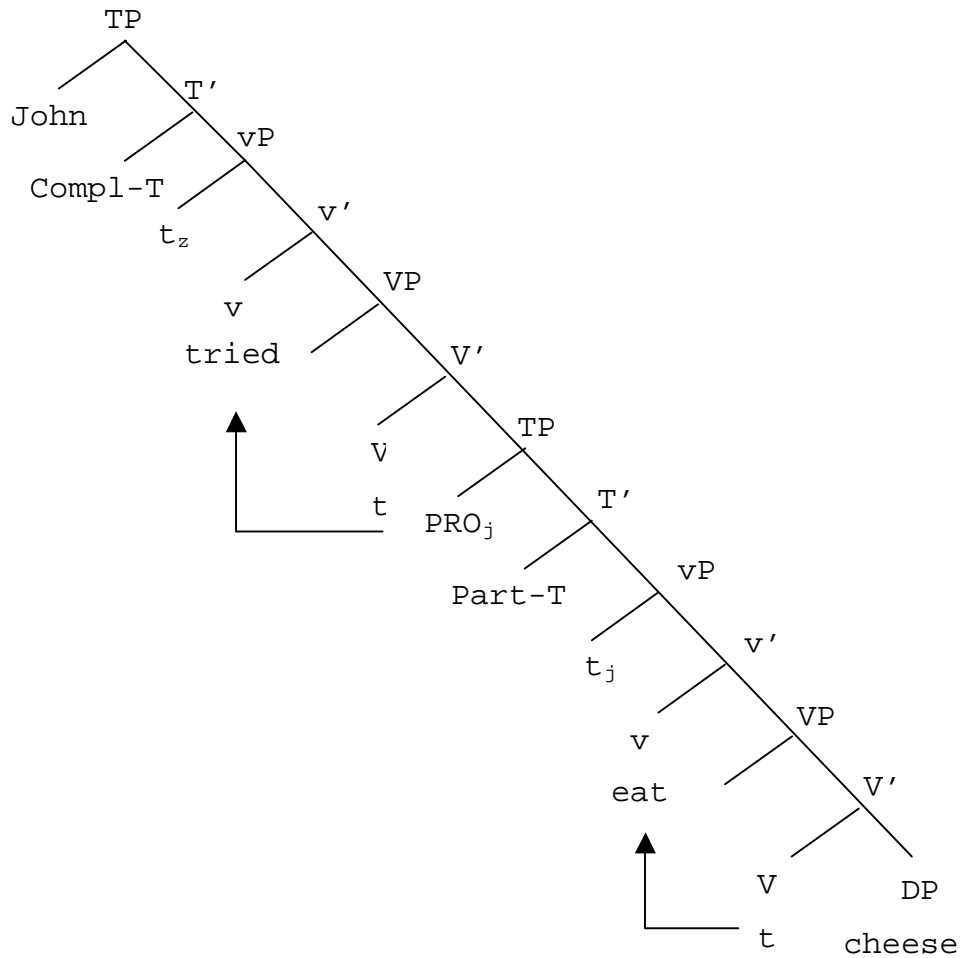
- (21) The destruction of the city.
- (22) The city's destruction.
- (23) The destruction [the city].
- (24) [The city]'s destruction e
- (25) The [destruction [of the city]].

There is a close similarity between the Assigning/Hosting distinction and Chomsky's Assigning/Realization concepts once we assume the idea in Minimalism that D-structure does not exist as a level of Representation. Specifically, if D-structure does not exist, Case Assignment is carried out at S-structure, which is close to saying that element X appears in a proper Case Assigning Configuration at this Level. In contrast, Case Realization is related to the surface form of elements. Turning to PRO, we may say that PRO appears in a Case Assignment Configuration but cannot Realize the Case, or in my terms, cannot Host the Case, because it is defective in terms of (19).

Continuing with (20), the derivation has not ended. The created TP is not a Phase, in my terms, and hence other elements are selected from the Numeration in (13), from which the matrix clause is constructed. Among others, the matrix subject *John* which saturates the external theta role of the matrix predicate *try* and the Complete Probe T will

be selected. We construct the rest of the derivation as follows:

(26)



The conditions for the right Case assignment configuration and the Case Hosting ability of the matrix subject are met in (26). On the one hand, matrix T involves the necessary Complete Probe to assign Case to its subject because it is [+T]. In turn, *John* has the right morphological feature make-up to host the Nominative Case

Value. Thus, unlike PRO, *John* retains the Case Value that has been assigned to it.

Let us next discuss the effects that the off-line insertion of PRO has on the Interfaces. I assume the idea in Martin and Uriagereka (in progress) that distinct Case morphology in the Numeration tokenizes a DP type (27), which amounts to saying that only elements that are in the Numeration will be tokenized.

(27) Distinct Case morphology tokenizes a DP type.

Importantly, Martin and Uriagereka also suggest the Conservation Law in (28).

(28) Conservation Law

Arguments that are marked as distinct (with Case) in the Numeration

- (i) are interpreted as distinct at LF, and
- (ii) are pronounced separately at PF.

Let us assume that LF is a collection of interpretable Chains. The Conservation Law in (28) dictates that the Chains at LF will be interpreted as distinct precisely because they have been marked as distinct (with Case) in the Numeration. Local Obviation in (29) is then a reflex of the distinct Case marking in the Numeration⁴.

(29) John_i loves him_j.

Turning now to the derivation of subject Control in (26), PRO is not marked as distinct in the Numeration

⁴ See Uriagereka (1997) for a first discussion of this idea.

because it is not in the Numeration to start with. As such, by the Conservation Law, it should not have LF or PF effects either. Because, derivationally, PRO is unable to host the Case Value either, the Chain of PRO should not be interpretable at LF. At this point, no more than three options suggest themselves. One is that the derivation is cancelled. This cannot be the case, because configurationally PRO occupies a legitimate position. Furthermore, I have suggested that PRO does not violate Binding Theory either because it needs no Binding Domain. Therefore, there is no configurational requirement that forces the cancellation of the derivation. A second option is that the derivation crashes at the Interfaces. This would create a curious situation if LF is a collection of Chains and if only elements that are marked with Case in the Numeration ought to have LF effects (Conservation Law). PRO was not included in the Numeration and no distinction requirement is imposed on the interpretation of the Chain of PRO with respect to other Chains. The Chain of PRO would violate FI at LF not because of the requirements of theta-Theory (which are met, precisely, due to PRO), but in essence because a predicate-argument relation which has been characterized in the course of the derivation cannot remain identified at LF, in terms of its own mechanics

(taking stock from derivational tokens, something which, strictly, PRO is not.) A third option would remedy the scenario. Suppose that the Chain of PRO is allowed to literally collapse into the nearest local well-formed and interpretable Chain, in the sense of Martin (1996). This process is possible because a) LF is a set of Chains and b) the Chain of PRO is never tokenized, thus the system does not recognize it as a distinct DP Chain. In other words, for the purposes of LF, there are not two (or more) separate DPs, one (the controller) being different from the other (PRO). Rather, LF sees each of these DPs as occurrences of the same token and takes the entire range of the relevant Chains (the derivationally created occurrences of the controller's Chain and PRO's Chain) as the range of a single Chain of a DP token. The result is that the interpretation of PRO has been derived: for LF purposes, we only have an extended Chain with various theta positions. This resulting object is identical to Hornstein's (2001) A-Movement Chain (where the Controller moves and PRO is a trace), except, of course, two Chains collapsed into one are not a single Chain, derivationally obtained. In particular, whereas a derivationally obtained Chain with multiple theta Roles violates Theta Theory, a collapsed Chain-composite satisfies it (each separate Chain does), in

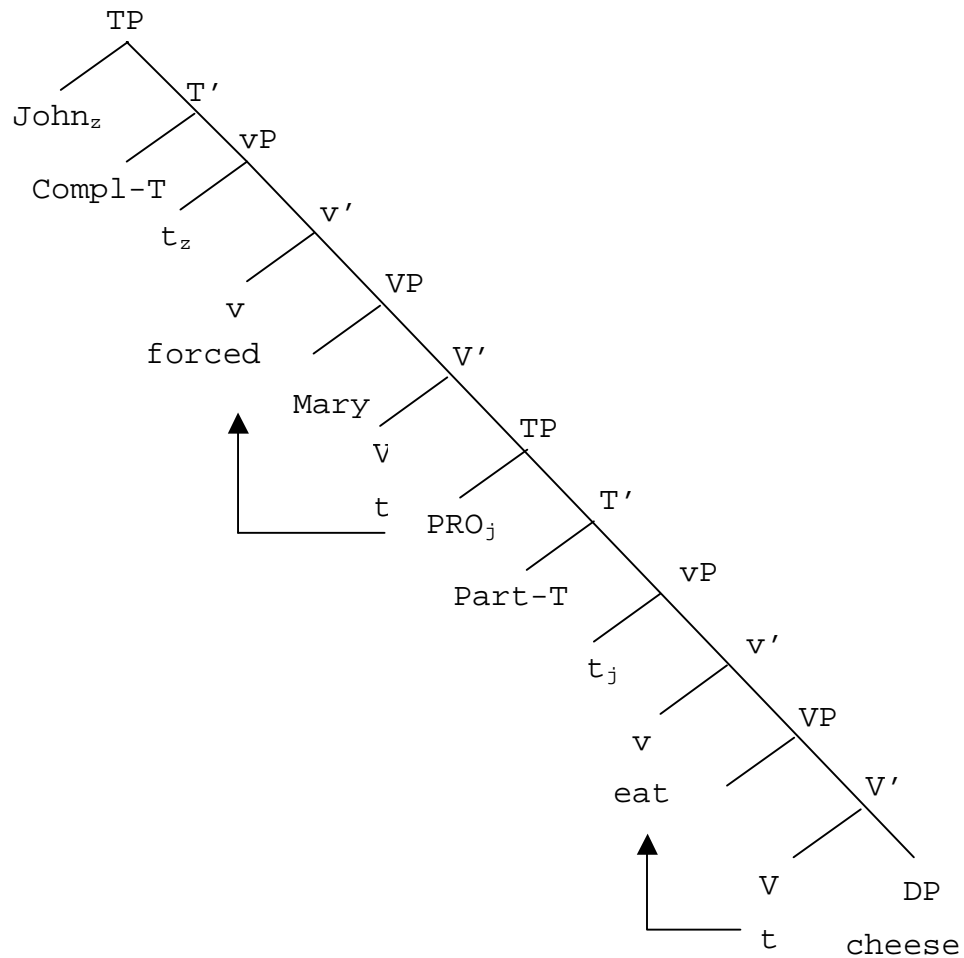
the course of the derivation. It is representationally (at LF) that the newly obtained object would not satisfy Theta Theory, but following Chomsky (1995) chapter 4, I will assume this Theory is just an input requirement.

For completeness sake, observe how similar considerations apply to a derivation where object control obtains, for instance in a sentence like (30):

(30) John forced Mary_i [PRO_i to eat cheese].

In the embedded TP the derivation proceeds equally as the subject Control instance exemplified in (16). Since PRO is not included in the Numeration and it is an Expletive, it is inserted in the vP cycle to prevent crashing in Theta-theoretic terms. Although PRO appears in a proper Case assigning configuration, its defective feature make up is unable to host the Case Value. It raises to [Spec TP] to satisfy the EPP feature of Partial-T and creates its own Chain. For FI at LF, the local Chain with which the Chain of PRO collapses is the Chain of the matrix object, because it is the most local one with respect to the Chain of PRO. The complete derivation is represented in (31):

(31)



Notice that in order to derive the interpretation of PRO we need to employ both some derivational and representational aspects. In terms of the derivational part, PRO is inserted to satisfy the Theta Criterion and hence does not violate any of the configurational requirements. It is also placed in a correct Binding configuration (i.e., it does not need a Domain). In representational terms, since LF only cares about the

interpretability and well-formedness of Chains, the Chain of PRO receives interpretation through the nearest well-formed Chain, resulting in an extended Chain with Multiple Theta positions, a legitimate LF object.

3 Why Complete T is compatible with lexical subjects but incompatible with PRO.

The previous section has presented a Minimalist solution to the problem of the interpretation of PRO. As for the problem of the distribution of PRO, recall that we need to answer two questions. First, why, unlike lexical subjects, PRO is compatible with Partial-T. Second, why, unlike PRO, lexical subjects are compatible with Complete T. The answer to the first question was provided in section 1. Briefly, lexical subjects are not compatible with Partial-T because the presence of Partial-T prevents the existence of a Binding Domain, and as a result, a violation of Binding Theory occurs. This section provides an answer to the second question, which will be straightforward assuming the mechanics of Control as presented in the previous section together with the observation in chapter 4 that PRO arises in TP complements rather than in CPs.

According to the proposal in section 2, PRO is interpreted as being strictly coreferential to its

antecedent because the only way for the Chain of PRO to survive is to collapse with the most local Interpretable Chain. The question is why this mechanism is not available for PRO in contexts where the local Probe is Complete. In other words, we need to explain why (32-33) do not succeed:

(32) *John said that [PRO left].

(33) *PRO left.

At this point the descriptive generalization in chapter 4 becomes relevant: PRO arises in TP complements and not in CPs. In view of the fact that the control effect derives from Chain collapse, the relevant question is what prevents Chain collapse to take place when PRO is placed in CP-s.

The key to the answer comes from the standard assumption that CPs are Phases, namely objects that are evaluated for interpretation when they are completed. If PRO occurs within a CP, the Chain of PRO will be part of the object that will be sent for evaluation because it is not in the Head or the Edge of CP. Thus, at LF, the Chain of PRO simply does not have a local well-formed and interpretable Chain with which it can collapse and the Chain of PRO will violate FI.

Notice that, although Complete-T does constitute a Domain for Binding, PRO does not need to satisfy any

Binding requirements since it has no anaphoric or pronominal features. In other words, what is wrong with PRO being the Goal of a Complete-T has nothing to do with Binding Theory. Rather, PRO is not compatible with complete T because the Chain of PRO ends up without an interpretation at LF.

Next, let us consider why lexical subjects are compatible with Complete T. They contain phi-features and anaphoric/pronominal features, and they are selected from the Lexicon to the Numeration. In other words, unlike PRO they enter the derivation from the Numeration. They need a Domain where their Binding Features are checked, and Complete-T does provide one, i.e., Binding Theory is respected. Complete-T, by virtue of being [+Tense] (apart from [+person]) is a regular Case assigning configuration. Since the morphological feature make-up of lexical subjects is not defective, they retain Case. Notice that lexical subjects are DPs that enter the derivation from the Numeration. As such, because they are marked as distinct (with Case) in the Numeration, the resulting Chain in the derivation will be interpreted as distinct at LF because of the Conservation Law. The resulting Chain is well-formed and interpretable for the Interfaces.

To summarize, PRO is incompatible with Compete-T because Complete T implies the existence of a CP Phase and the Chain of PRO does not have a local interpretable Chain to collapse with when the Phase is evaluated. This completes the explanation of the problem of the distribution of PRO, namely, why PRO and lexical subjects are in complementary distribution.

4 Why only subjects can be controlled

The Theory of Control presented in this thesis suggests that PRO is inserted off-line to the derivation in order to save it from crashing in Theta-Theoretic terms. This is a Last Resort mechanism in the sense that it only applies when there is no DPs left in the Numeration that can saturate the existing Theta Role. However, it seems that resorting to this mechanism is restricted in view of the data in (34-35). In other words, with transitive or ditransitive predicates, only the subject may be PRO, which indicates that the system may resort to the off-line insertion of PRO only once. This is the traditional problem of why only subjects can be controlled. Note that the restriction is not related to the nature of the Theta Role that PRO must saturate. Either Patients (internal Objects of unaccusative predicates) (36) or Agents (external

subjects of unergative predicates) (37) qualify for being saturated by PRO.

(34) *John tried [PRO to kiss PRO].

(35) *John tried [PRO to give PRO to PRO].

(36) John tried [to leave PRO].

(37) John tried [to PRO kiss her].

To start with, note that the off-line insertion of PRO is a response to an 'alarm situation' in which, if the system does not insert PRO, the derivation crashes in theta-theoretic terms assuming that Theta Theory is an interface condition. Let us assume the standard idea that the Computational System has no memory. This implies that the system is unable to count the times it inserts PRO for mere identification-of-tokens purposes (PRO cannot get tokenization via Case). This is not a problem with unaccusative predicates, since first and last insertion coincide. In other words, inserting one element involves no counting, and hence no need for memory. The situation is different with transitive predicates, since two PROs need to be inserted, and this requires some memory for counting the times in which PRO is inserted. However, if the system has no memory, the question of why PRO is not inserted more than once is superfluous, i.e., the design of the system does not consider such a situation. Note that the system

would be capable of inserting PRO more than once if it were capable of recognizing the two PROs as distinct in nature. However, this cannot be the case precisely because PRO has no features per se, as argued in section 1.

To finish with distransitive predicates, note that PRO may only be inserted in the subject position because the off-line insertion of PRO is a Last Resort mechanism. In other words, it only applies when there is no DP left in the Numeration to saturate the necessary Theta Roles. Thus, the premature insertion of PRO is a violation of Last Resort. This explains the asymmetry in (38-39):

(38) John tried [PRO to eat the fish]

(39) *John tried [the fish to eat PRO]

To summarize, this section has provided an answer to two questions. First, with regards to why PRO is not inserted more than once within a vP, I have suggested that the design of the Computational System as a memoryless system implies that PRO may only be inserted once. Second, with distransitive predicates, PRO may only be inserted in the subject position because the mechanism of inserting PRO must obey Last Resort. Thus, the traditional problem of why only subjects may be controlled (i.e., why only subjects may be PRO) has been solved.

5 A psycholinguistics prediction

This thesis suggests that the interpretation of PRO is derived through the mechanics of Chain collapse in the sense of Martin (1996) (see section 2). Recall that PRO is only compatible with Partial-T because Partial-T implies that the embedded clause is a TP rather than CP. More specifically, TPs are not Phases, and when the matrix CP Phase is evaluated, the Chain of PRO can collapse to the Chain of the antecedent because both Chains are contained in the same object that is being evaluated. The question is what happens when a matrix clause includes multiple embeddings of EC as in (40):

(40) John managed [_{TP} PRO to try [_{TP} PRO to start [_{TP} PRO to break the door].

Following the logic of the system that I have presented, all the Chains of PRO in a sentence like (40) would have to be put on hold for interpretation. When the matrix clause is created and the whole CP is evaluated at LF, all the Chains of PRO would collapse with the Chain of the antecedent. This would create a super-Chain that would include all the Chains of PRO. Note that this is a more complex object than a mere Chain created by movement. Interestingly, this makes a prediction from a psycholinguistics point of view. The prediction is that a

simple embedding of EC is simpler to parse than a matrix clause that includes multiple embeddings of EC. If this prediction turns out to be true, it will suggest that the mechanics of control presented in this thesis is basically correct.

CHAPTER 6: SUMMARY AND CONCLUDING REMARKS

This thesis provides evidence that Raising and Control involve distinct mechanisms. In particular, the fact that PRO appears in configurations where regular Structural Case is assigned suggests abandoning the idea that Control may be subsumed under Raising. In view of the fact that the Movement analysis is not correct, it also provides indirect support for the idea that Theta Roles are configurational rather than Features and that the Theta Criterion must be respected.

The proposal also renders Null Case unnecessary both on empirical grounds (rather than Null Case concord, we find regular Case concord in complements of EC predicates) and on theoretical grounds (negative evidence for Null Case renders it unnecessary within the system).

I have acknowledged the distinction in Landau (1999) between the two types of OC, namely Exhaustive Control and Partial Control. I have suggested that PC involves no genuine Control in view of the fact that, crosslinguistically, (i) these predicates often license lexical subjects and (ii) the subject position is not strictly controlled but is often free in reference.

The fact that NP-trace, PRO and lexical subjects are in complementary distribution correlates with the nature of the T that they relate to. Raising T is Defective [-T, -person], Control T is Partial [+T, -person] and lexical subjects are licensed with Complete T [+T, +person]. The [+T] feature is due to the Tensed nature of the embedded clause, and in contrast to [-T] in Raising, it assigns regular Case to nominals (PRO/lexical subjects). The source of the [person] feature is Comp, which endows T with this feature. The lack of [person] in Control correlates with the observation that EC predicates take TPs rather than CPs.

The interpretation of PRO is derived as follows: PRO is featureless element that is inserted off-line to the derivation as Last Resort (only when there is no DP left in the Numeration to saturate the existing theta Roles). Although it appears in a local relation to a Case assigning Probe [+T], its defective nature makes it unable to host the Case Value. In order to prevent a FI violation, the Chain of PRO collapses to the most local Chain that binds it, the subject or the object Chain in Subject and Object Control respectively. This derives the Control effect.

As for the complementary distribution of PRO and lexical subjects, I have answered the questions of why PRO

is only compatible with Partial-T and lexical subjects with Complete-T. Lexical subjects are not compatible with Partial-T because Partial-T prevents a definition of Domain for Binding, and lexical subjects need a Domain to satisfy their Binding requirements. In contrast, PRO does not have Binding features and, in this sense, it is compatible with Partial-T. On the other hand, PRO is not compatible with Complete-T because Complete-T involves a CP Phase, and as a consequence, PRO does not have a local Chain to collapse with at the point of its evaluation.

To conclude, recall that in the end of chapter 1 I posited seven questions that needed further inquiry. In the remainder of this section I will briefly state the questions and the answers.

First, I mentioned that, in the Chomskyan tradition Control T is defective but less defective than Raising T because it is capable of assigning Null Case to PRO. In fact, if Null Case is part of the system of Structural Cases, I suggested that it is not clear how Control T, being defective, follows the Finite pattern. I argued that some clarification was needed in this respect. In the thesis I have explicitly identified the degrees of defectiveness in T. Raising T is Defective ([-T, -person]),

Control T is Partial ([+T, -person]) and T in lexical subject licensing is Complete ([+T, +person]).

Second, I suggested that the existence of Null Case is suspicious because, although it is a Structural Case, no other nominal other than PRO may bear it. In the thesis I have suggested that PRO bears Regular Case rather than Null Case. This renders Null Case unnecessary within the system.

The third point addressed the problem of the interpretation of PRO. The question is whether we need a complex mechanism such as Chain collapse that derives the control effect in view of the fact that a simpler account such as the Movement analysis would be sufficient. I have argued that, in view of the fact that PRO receives regular Case, the Movement analysis of control cannot be maintained, which suggests that Chain collapse may be an actual possibility in the system. Further investigation will shed light on whether this is a mechanics that arises exclusively in Control or, on the contrary, whether it is more generally employed by the system.

Fourth, given Minimalist Considerations, the question is whether a formative like PRO exists at all. The answer is positive. According to the mechanics of Control presented in the thesis, PRO is featureless, but

nevertheless the system needs it to prevent a violation of the Theta Criterion.

Fifth, I have inquired into the typology of Control presented in Landau. The conclusion is that only EC predicates induce genuine Control (a phonetically null subject that must be strictly coreferential to an antecedent). In contrast, the crosslinguistic picture suggests that PC predicates often license subjects that are free in reference as well as lexical subjects.

Sixth, Chomsky claims that complements to Control predicates are CP Phases. However, in view of the fact that the evidence that he presents does not involve EC predicates (but rather PC predicates/contexts), I have inquired into whether the same holds for EC contexts. The result is that EC predicates invariably take TP complements, and hence not Phases. This is crucial for deriving the control effect in my terms.

Finally, I have inquired into whether the notion of finiteness is relevant in accounting for the distribution of PRO and lexical subjects. I have concluded that it is irrelevant. In fact, none of the traditional expectations hold: PRO is often licensed in finite contexts and lexical subjects in infinitival contexts. Rather, the distributional problem is related to the nature of the T-

Probe that each element relates to, Partial-T in Control
and Complete-T in lexical subject licensing.

REFERENCES

- Alboiu, Gabriela and Virginia Motapanyane. 2000. The Generative Approach to Romanian Grammar: an Overview. In *Comparative studies in Romanian Syntax*, edited by V. Motapanyane, 1-48. Elsevier Science Ltd, Oxford.
- Alexiadou, Artemis and Elena Anagnostopoulou. 1999. Raising without infinitives and the Nature of Agreement. In *Proceedings of WCCFL 18*, 14-26.
- Allan Jones, Michael. 1992. Infinitives with specified subjects in Sardinian. In *Theoretical Analyses in Romance Linguistics*, edited by Christiane Laeufer, Terrell Morgan, A., 295-309. Benjamins, Amsterdam.
- Allen, J.H. and J.B. Greenough. 1931. *A new Latin Grammar*. Boston: Ginn and Company.
- Artiagoitia, Xabier. 2001. Seemingly Ergative and Ergatively Seeming. In *Features and Interfaces in Romance*, edited by Julia Herschensohn, Enrique Mallen, Karen Zagana, 1-22. Benjamins, Amsterdam, Netherlands.
- Baker, Mark C. 1988. *Incorporation: A Theory of Grammatical Function Changing*. Chicago: University of Chicago Press.
- Bauer, Winifred (with William Parker and Te Kareongawai Evans). 1993. *Maori*. London and New York: Routledge.
- Bayer, Josef. 1984. COMP in Bavarian syntax. *The Linguistic Review* 3, 209-274.
- Bennis, Hans, and Liliane Haegeman. 1984. On the Status of Agreement and Relative Clauses in West-Flemish. In *Sentential Complementation: Proceedings of the International Conference Held at UFSAL*, Brussels, June, 1983. Edited by W. de Geest, Y. Putseys, Henk van Riemsdijk, 33-53. Dordrecht: Foris.
- Beukema, Frits and Marcel den Dikken. 1989. The position of the Infinitival marker in the Germanic languages. In *Sentential Complementation and the Lexicon. Studies in Honor of Wim de Geest*, edited by Dany Jaspers, Wim Klooster, Ivan Putseys and Pieter Seuren, 57-76. Dordrecht: Foris.

- Bittner, Maria and Ken Hale. 1996. The Structural Determination of Case and Agreement. *Linguistic Inquiry* 27, 1-68.
- Blight, Ralph .C. 1992. Long-distance binding and subordinate clauses in Latin. Ms., Wayne State University.
- Boeckx, Cedric. 2000. A Note on Contraction. *Linguistic Inquiry* 31, 357-366.
- Bošković, Željko and Daiko Takahashi. 1998. Scrambling and Last Resort. *Linguistic Inquiry* 29, 347-366.
- Bošković, Željko. 1994. D-Structure, Theta Criterion, and Movement into Theta Positions. *Linguistics Analysis* 24, 247-286.
- Bošković, Željko. 1995. *Principles of Economy in Nonfinite Complementation*. Doctoral Dissertation. UConn.
- Bošković, Željko. 1997. *The Syntax of Nonfinite Complementation: An Economy Approach*. *Linguistic Inquiry Monographs* 32. MIT Press.
- Bouchard, Denis. 1984. *On the Content of Empty Categories*. Dordrecht: Foris.
- Bouchard, Denis. 1985. PRO, Pronominal or Anaphor. *Linguistic Inquiry* 16, 471-477.
- Bresnan, Joan. 1982. Control and Complementation. *Linguistic Inquiry* 13, 343-434.
- Burzio, Luigi. 1981. *Intransitive Verbs and Italian Auxiliaries*. Doctoral Dissertation, MIT.
- Burzio, Luigi. 1986. *Italian Syntax. A Government-Binding Approach*. Dordrecht: Reidel.
- Byrne, Francis. 1988. Deixis as a Noncomplementizer Strategy For Creole Subordination Marking. *Linguistics* 26(n3), 335-364.

- Calabrese, Andrea. 1992. The Lack of infinitival clauses in Salentino: a synchronic analysis. In *Theoretical analyses in Romance linguistics: selected papers from the nineteenth linguistic symposium on Romance languages*, edited by Christiane Laeufer and A. Morgan Terrell. (Amsterdam studies in the theory and history of linguistic science. Series 4: Current issues in linguistic theory 74) Amsterdam, The Netherlands: John Benjamins, 267-94.
- Carroll, Susanne. 1983. Remarks on FOR-TO Infinitives. *Linguistic Analysis* 12, no. 4, 415-451.
- Chomsky, Noam and Howard Lasnik. 1977. Filters and Control. *Linguistic Inquiry* 8, 425-504.
- Chomsky, Noam and Howard Lasnik. 1993. The theory of Principles and Parameters. In *Syntax: An International Handbook of Contemporary Research*, edited by J. Jacobs, A. von Stechow, W. Sternefeld and T. Vennemann, 506-569. Berlin and New York: Walter de Gruyter.
- Chomsky, Noam. 1973. Conditions on transformations. In *Festschrift for Morris Halle*, edited by Stephen Anderson and Paul Kiparsky. New York: Holt, Rinehart, and Winston.
- Chomsky, Noam. 1980. On Binding. *Linguistic Inquiry* 11, 1-46.
- Chomsky, Noam. 1981a. *Lectures on Government and Binding*. Dordrecht: Foris.
- Chomsky, Noam. 1986b. *Knowledge of Language: Its Nature, Origin, and Use*. New York: Praeger.
- Chomsky, Noam. 1993. A Minimalist Program for Linguistic Theory. In *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, edited by K. Hale and S.J. Keyser, 1-52. Cambridge MA: MIT Press.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, Mass.: MIT Press.
- Chomsky, Noam. 1998. Minimalist inquiries: the framework. In *MIT Occasional Papers in Linguistics* 15.

- Chomsky, Noam. 1999. Derivation by Phase. In *MIT Occasional Papers in Linguistics* 18.
- Chomsky, Noam. 2000. Minimalist Inquiries: the Framework. In *Step by Step: Essays on minimalism in honor of Howard Lasnik*, edited by Roger Martin, David Michaels and Juan Uriagereka. Cambridge, MA.: MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, edited by Michael Kenstowicz, 1-52. Cambridge, Mass.: MIT Press.
- Chomsky, Noam., 1981b. Principles and Parameters in Syntactic Theory. In *Explanation in Linguistics: The Logical Problem of Language Acquisition*, edited by N. Hornstein and D. Lightfoot. London: Longman.
- Chung, Sandra. 1978. *Case Marking and Grammatical Relations in Polynesian*. Austin: University of Texas Press.
- Comorovski, Ileana. 1986. Control and obviation in Romanian. In *Proceedings of the second Eastern States conference on linguistics*, edited by Choi Soonja, Dan Devitt, Wynn Janis, Terry McCoy, and Zheng-sheng Zhang, 47-56. Columbus, Oh.: Department of Linguistics, Ohio State University.
- Davidson, Donald. 1967. On Saying That. *Synthese* 19, 130-146. [Reprinted in: *The Logic of Grammar*. Edited by D. Davidson and G. Harman, 143-152. Encino, CA: Dickenson Press, 1975.]
- Davis, Lori. 1984. *Arguments and Expletives*. Doctoral Dissertation, University of Connecticut, Storrs.
- Elordieta, Arantzazu. 2001. *Verb Movement and Constituent Permutation in Basque*. Doctoral Dissertation, Leiden University.
- Enç, Murvet. 1991. On the absence of the Present tense morpheme in English. Ms., University of Wisconsin, Madison.

- Farkas, Donka F. 1984. Subjunctive Complements in Rumanian. In *Papers from the XIIth Linguistics Symposium on Romance Languages*, edited by P. Baldi, 355-372. John Benjamins, Amsterdam.
- Farkas, Donka F. 1985. Obligatory controlled subjects in Romanian. In Chicago Linguistics Society. Papers from the general session at the 21th regional meeting 21/1, 90-100.
- Farkas, Donka F. 1992. On Obviation, in *Lexical Matters*, edited by I. Sag and A. Szabolcsi, 85-110. CSLI, Publications.
- Fernández Lagunilla, Marina. 1987. Los infinitivos con sujetos léxicos en español. In *Sintaxis de las lenguas románicas*, edited by V. Demonte and Fernández Lagunilla. Ediciones El Arquero, Madrid.
- Freidin, Robert and Rex Sprouse. 1991. Lexical Case Phenomena. In *Principles and Parameters in Comparative Grammar*, edited by Robert Freidin, 392-416. Cambridge, MA:MIT Press.
- George, Leland M. and Jaklin Kornfilt. 1981. Finiteness and Boundedness in Turkish, in *Binding and Filtering*, edited by Frank Heny, 105-127. Cambridge, Mass.: MIT Press.
- Giorgi, Alessandra. 1984. Toward a Theory of Long-distance anaphors: a GB approach. *The Linguistic Review* 3, 307-361.
- Grimshaw, Jane. 1979. Complement selection and the Lexicon. *Linguistic Inquiry* 10, 279-326.
- Grosu, Alexander, and Julia Horvath. 1984. The GB Theory and Raising in Romanian. *Linguistic Inquiry* 15, 348-353.
- Haegeman, Liliane. 1986. INFL, COMP and Nominative Case Assignment in Flemish Infinitivals. In *Features and Projections*, edited by Pieter Muysken, Henk van Riemsdijk, 123-137. Dordrecht: Foris.
- Haegeman, Liliane. 1990. Subject Pronouns and Subject Clitics in West-Flemish. *The Linguistic Review* 7, 333-363.

- Haegeman, Liliane. 1991. *Introduction to Government and Binding Theory*. Blackwell, Oxford.
- Haegeman, Liliane. 1992. *Theory and Description in Generative Syntax. A Case Study in West Flemish*. Cambridge University Press.
- Hale, Kenneth. and Samuel. Jay. Keyser. 1994. On Argument Structure and the Lexical Expression of Syntactic Relations. In *The View from Building 20: Essays in Honor of Sylvain Bromberger*, edited by K. Hale and S. J. Keyser, 53-109. Cambridge, MA: MIT Press.
- Hall, Robert. 1953. *Haitian creole. Grammar, texts and vocabulary*. Kraus Reprint New York 1970.
- Hasegawa, Nobuko. 1987. INFL movement and the scope of Negation. Ms., University of Massachusetts at Amherst.
- Henry, Alison. 1987. Infinitives in a For-to dialect. Ms., University of Ulster at Jordanstown.
- Henry, Alison. 1992. Infinitives in a For-to dialect. *Natural Language and Linguistic Theory* 10, 279-301.
- Higginbotham, James. 1992. Reference and Control. In *Control and Grammar*, edited by Richard Larson, Sabine Iatridou, Utpal Lahiri, and James Higginbotham, 79-108. Dordrecht: Kluwer.
- Hoebeker, M. 1975. Voorzetselconstructies met infinitief + te in een Zuidnederlands dialect. In *Taal- en letterkundig gastenboek voor Prof. Dr. G.A. van Es*, edited by G. Kazemier & P.P.J. van Caspel, 67-84. Groningen: Archief voor de Nederlandse Syntaxis.
- Holmberg, Anders. 1986. *Word Order and Syntactic Features in the Scandinavian Languages and English*. Doctoral Dissertation, University of Stockholm.
- Hornstein, Norbert, and David Lightfoot. 1987. Predication and PRO. *Language: Journal of the Linguistic Society of America* 63, 23-52.
- Hornstein, Norbert. 1990a. Verb Raising in Icelandic Infinitives. In *NELS* 20, 215-229.

- Hornstein, Norbert. 1999. Movement and Control. *Linguistic Inquiry* 30, 69-96.
- Hornstein, Norbert. 2000. *Move! A minimalist theory of construal*. Oxford: Blackwell.
- Huang, James. 1982. *Logical Relations in Chinese and the Theory of Grammar*. Doctoral Dissertation, MIT.
- Iatridou, Sabine. 1993. On Nominative Case assignment and a Few Related Things. In *MITWPL 19. Papers on Case and Agreement 2*, edited by Colin Phillips, 175-196.
- Jaeggli, Oswaldo. 1980. Remarks on *to* contraction. *Linguistic Inquiry* 11, 239-245.
- Jakab, Edit. 1999. Is PRO Really Necessary? A Minimalist Approach to Infinitival and Subjunctive(-like) Constructions in Serbo-Croatian and Hungarian. In *Formal Approaches to Slavic Linguistics: The Seattle Meeting 1998*, edited by Katarzyna Dziwirek, Herbert Coats, Cynthia M. Vakareliyska.
- Joseph, Brian. 1983. *The Synchrony and Diachrony of the Balkan Infinitive*. Cambridge University Press.
- Kayne, Richard. 1981. Two notes on the NIC. In *Theory of markedness in generative grammar: Proceedings of the 1979 GLOW Conference*, edited by Adriana Belletti, Luciana Brandi, and Luigi Rizzi. Pisa: Scuola Normale di Pisa.
- Kayne, Richard. 1981b. ECP extensions. *Linguistic Inquiry* 12, 93-134.
- Kayne, Richard. 1990. Romance clitics and PRO. *Proceedings of NELS* 20.
- Kayne, Richard. 1994. *The Antisymmetry of Syntax*. Cambridge, Mass.: MIT Press.
- Kempchinsky, Paula. 1990. Más sobre el efecto de referencia disjunta del subjuntivo, in *Indicativo y subjuntivo*, edited by Ignacio Bosque, 234-258. Madrid: Ediciones Taurus.

- Koopman, Hilda and Claire Lefebvre. 1981. Haitian Creole Pu, in *Generative Studies on Creole Languages*, edited by Pieter Muysken, 201-221. Dordrecht: Foris.
- Koster, Jan. 1984. On Binding and Control. *Linguistic Inquiry* 15, 417-459.
- Laka, Itziar. 1993a. Unergatives that Assign Ergative, Unaccusatives that Assign Accusative, in *Papers on Case & Agreement I*, edited by J. Bobaljik and C. Phillips, Cambridge MA: MITWPL 18, 149-172.
- Landau, Idan. 1999. *Elements of Control*. Doctoral Dissertation, MIT.
- Landau, Idan. 2001. *Elements of Control*. Kluwer: Dordrecht.
- Landau, Idan. (forthcoming). The Scale of Finiteness and the Calculus of Control. *NLLT*.
- Lasnik, Howard. 1995. Last Resort and Attract F. In *Proceedings of FLSM 6*, 62-81. Indiana University Linguistics Club, Bloomington, Indiana.
- Lasnik, Howard and Robert. Freidin. 1981. Core grammar, Case theory, and markedness. In *Theory of Markedness in Generative Grammar*, edited by A. Belletti, L. Brandi, and L. Rizzi, 407-421. Scuola Normale Superiore, Pisa. [Reprinted, with minor revisions, in Lasnik (1990) *Essays on Restrictiveness and Learnability*.]
- Lebeaux, David. 1985. Locality and Anaphoric Binding. *The Linguistic Review* 4, 343-363.
- Lightfoot, David. 1976. Trace theory and twice-moved NPs. *Linguistic Inquiry* 7, 559-582.
- Lobeck, Anne. 1990. Functional Heads as Proper Governors. In *Proceedings of the 20th Northeastern Linguistics Society Conference*. GLSA, University of Massachusetts, Amherst.
- Mahajan, Anoop Kumar. 1990. *The A/A-bar Distinction and Movement Theory*. Doctoral Dissertation, MIT.
- Maling, Joan. 1984. Non-clause-bounded reflexives in Modern Icelandic. *Linguistics and Philosophy* 7, 211-241.

- Manzini, Maria Rita. 1983. *Restructuring and Reanalysis*.
 Doctoral Dissertation, MIT, Cambridge, Mass.
 [Distributed by: *MIT Working Papers in Linguistics*,
 Cambridge, Mass.]
- Manzini, Maria Rita. 1983. On Control and Control Theory.
Linguistic Inquiry 14, 421-446.
- Manzini, M. Rita and Anna Roussou. 1998. A Minimalist
 Theory of A-movement and Control. Ms., Firenze/UCL
 Bangor.
- Manzini, Rita and Anna Roussou. 2000. A Minimalist Theory
 of A-movement and Control. *Lingua* 110, 409-447.
- Martin, Roger. 1993. Null Case and the distribution of PRO.
 Ms., University of Connecticut, Storrs.
- Martin, Roger. 1996. *A Minimalist Theory of PRO and
 Control*. Doctoral Dissertation, UConn.
- Martin, Roger. 1999. Case, the Extended Projection
 Principle, and Minimalism. In *Working Minimalism*, edited
 by S. D. Epstein and N. Hornstein. Cambridge, MIT Press.
- Martin, Roger. 2001. Null Case and the Distribution of PRO.
Linguistic Inquiry, 32, 141-166.
- McCloskey, James. 1996a. On the Scope of Verb Movement in
 Irish. *Natural Language & Linguistic Theory* 14-1, 47
 -104.
- Meireles, José A. and Eduardo Raposo. 1992. Tense and
 Binding Theory in Portuguese, in *Romance Linguistics:
 the Portuguese Context*, edited by A. Dale, Koike and
 Donaldo Macedo, 67-86.
- Mensching, Guido. 2000. Infinitive constructions with
 Specified Subjects. A syntactic Analysis of the Romance
 Languages. Oxford Studies in Comparative Syntax, OUP.
- Mohanan, K.P. 1982. Infinitival subjects, Government, and
 Abstract Case. *Linguistic Inquiry* 13, 323-327.

- Motapanyane, Virginia. 1995. NP-Movement from Finite Clauses in Rumanian, in *Advances in Roumanian Linguistics*, edited by Guglielmo Cinque, Giuliana Giusti, 161-170. Benjamins, Amsterdam.
- Motapanyane, Virginia. 1995. *Theoretical Implications of Complementation in Romanian*. Padova: Unipress. (Rivista di Grammatica Generativa monograph series).
- Napoli, Donna Jo. 1979. Reflexivization across clause boundaries in Italian. *Journal of Linguistics* 15, 1-28.
- Nemoto, Naoko. 1991. Scrambling and Conditions on A-movement. *WCCFL* 10, 349-358.
- Nunes, Jairo. 1993. English Participle Constructions: Evidence for a [+PF, -LF] Case. In *University of Maryland Working Papers in Linguistics* 1.
- Nunes, Jairo. 1994. Another Look at Lithuanian Impersonal Passives. *Studies in the Linguistic Sciences* 24, 347-360.
- Nunes, Jairo. 1995. *The copy Theory of Movement and the linearization of Chains in the Minimalist Program*. Doctoral Dissertation, University of Maryland, College Park.
- O'Neil, John. 1995. Out of Control. In *NELS* 25, 361-371.
- O'Neil, John. 1997. *Means of Control: Deriving the Properties of Control Theory in the Minimalist Program*. Doctoral Dissertation, Harvard University. Accepted for publication by Beech Stave Press.
- Ormazabal, Javier. 1995. *The Syntax of Complementation: On the Connection of Syntactic Structure and Selection*. Doctoral Dissertation, UConn, Storrs.
- Ormazabal, Javier. 2000. Conspiracy Theory of Case and Agreement. In *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, edited by Roger Martin, David Michaels and Juan Uriagereka, 235-60. MIT Press, Cambridge, MA.
- Ortiz de Urbina, Jon. 1989. *Parameters in the grammar of Basque*. Dordrecht: Foris.

- Pesetsky, David and Esther Torrego. 2001. T-to-C Movement: Causes and Consequences. In *Ken Hale. A Life in Language*, edited by M. Kenstowicz, 355-426. Cambridge, MA: The MIT Press.
- Pesetsky, David. 1982. *Paths and Categories*. Doctoral Dissertation, MIT, Cambridge, Mass.
- Pesetsky, David. 1995. *Zero Syntax*. MIT Press.
- Philippaki-Warbuton, Irene. 1987. The theory of empty categories and the pro-drop parameter in Modern Greek. *Journal of Linguistics* 23, 289-318.
- Pica, Pierre. 1984. On the distinction between argumental and non-argumental anaphors. In *Sentential Complementation*, edited by Wim de Geest and Yvan Putseys, 185-193. Dordrecht: Foris.
- Picallo, Maria Carme. 1985. *Opaque Domains*. Doctoral Dissertation. CUNY, New York.
- Picallo, Maria Carme. 1990. Modal Verbs in Catalan. *Natural Language and Linguistic Theory* 8-2, 285-312.
- Piera, C. 1983. Some infinitival constructions in Spanish. Ms., Cornell.
- Pires, Acrisio. 2001. PRO, Movement and Binding in Portuguese. In *Romance Syntax, Semantics and L2 Acquisition. Selected Papers from the 30th Linguistic Symposium on Romance Languages*, edited by Joaquim Camps and Caroline Wiltshire.
- Pires, Acrisio. 2001. *The Syntax of Gerunds and Infinitives: Subjects, Case and Control*. Doctoral Dissertation. University of Maryland at College Park.
- Platzack, Christer. 1986. COMP, INFL and Germanic word order. In *Topics in Scandinavian Syntax*, edited by L. Hellan and K. Koch-Christensen, 185-234. Dordrecht: Reidel.
- Postal, Paul. 1970. On Coreferential Complement Subject Deletion. *Linguistic Inquiry* 1, 439-500.

- Progovac, Ljiljana. 1988. *A Binding Approach to Polarity Sensitivity*. Doctoral Dissertation, University of Southern California, Los Angeles.
- Progovac, Ljiljana. 1993. Locality and Subjunctive-like complements in Serbo-Croatian. *Journal of Slavic Linguistics* 1, 116-144.
- Progovac, Ljiljana. 1993. The (Mis)behavior of Anaphora and Negative Polarity. *The Linguistic Review* 10, 37-59.
- Raposo, Eduardo and Juan Uriagereka. (In preparation.) T.
- Raposo, Eduardo and Juan Uriagereka. 1990. Long-Distance Case assignment. *Linguistic Inquiry* 21, 505-537.
- Raposo, Eduardo. 1987. Case Theory and Infl-to-Comp: The Inflected Infinitive in European Portuguese. *Linguistic Inquiry* 18, 85-109.
- Reuland, Eric. 1983. Governing -ing. *Linguistic Inquiry* 14, 101-136.
- Ritter, Elisabeth. 1995. On the Syntactic Category of Pronouns and Agreement. *Natural Language and Linguistic Theory* 13, 405-443.
- Rivero, Maria-Luisa. 1989. Barriers and Rumanian. In *Studies in Romance Linguistics*, edited by Carl Kirschner, Janet DeCesaris, 289-312. John Benjamins.
- Rizzi, Luigi. 1978. A Restructuring Rule in Italian Syntax. In *Recent Transformational Studies in European Languages*, edited by S. J. Keyser. Cambridge: MIT Press.
- Rizzi, Luigi. 1982. *Issues in Italian Syntax*. Dordrecht: Foris.
- Rosenbaum, Peter. 1967. *The Grammar of English predicate complement constructions*. Cambridge, Mass.: MIT Press.
- Roussou, Anna. 2001. Control and Raising. In *Comparative Syntax of Balkan Languages*, edited by Maria-Luisa Rivero and Angela Ralli. Oxford University Press.
- Rouveret, Alain. 1980. Sur la notion de proposition finie: Gouvernement et inversion. *Langages* 60, 75-107.

- Rouveret, Alain and Jean-Roger Vergnaud. 1980. Specifying Reference to the Subject. *Linguistic Inquiry* 11, 97-202.
- Rudin, Catherine. 1988. Finiteness and Opacity: evidence from the Balkans. In *Studies in Syntactic Typology*, edited by Michael Hammond, Edith Moravcsik and Jessica Wirth, 37-51. Amsterdam: Benjamins.
- Saito, Mamoru and Keiko Murasugi. 1990. N'-deletion in Japanese. In *University of Connecticut Working Papers in Linguistics* 3, edited by J. Ormazabal and C. Tenny, 86-107. Department of Linguistics, University of Connecticut, Storrs.
- San Martin, Itziar & Juan Uriagereka. 2002. Infinitival Complementation in Basque. In *Erramu Boneta: A Festschrift for Rudolf de Rijk*. EHU & ASJU.
- San Martin, Itziar. 1999. Control in Basque. Doctoral research paper: University of Maryland.
- San Martin, Itziar. 2000. Control in Basque. In *Proceedings of WCCFL 19*, Cascadilla Press.
- Schachter, Paul. 1984. Auxiliary reduction: An argument for GPSG. *Linguistic Inquiry* 15, 514-523.
- Sedivy, Julie. 1990. Against a Unified Analysis of Negative Polarity Licensing. *Cahiers Linguistiques d'Ottawa* 18, 95-105.
- Shlonsky, Ur. 1997. Clause Structure and Word Order in Hebrew and Arabic: an Essay in Comparative Semitic Syntax. *Oxford Studies in Comparative Syntax*, Oxford University Press, New York.
- Sigurðsson, Halldór Ármann. 1989. *Verbal Syntax and Case in Icelandic*. Doctoral Dissertation, University of Lund.
- Sigurðsson, Halldór Ármann. 1990. Long-distance reflexives and moods in Icelandic. In *Modern Icelandic Syntax*, edited Joan Maling, Annie Zaenen, 309-346. Syntax and Semantics 24. New York: Academic Press, San Diego.
- Sigurðsson, Halldór Ármann. 1991. Icelandic Case-marked PRO and the Licensing of Lexical Arguments. *Natural Language & Linguistic Theory* 9, 327-363.

- Soltan, Usama. 1996. A Comparative Analysis of Some Deletion Phenomena in English and Standard Arabic. Unpublished MA thesis, Faculty of Alsun, Ain Shams University, Cairo.
- Sorin, Dobrovie-Sorin. 2001. Head-to-Head Merge in Balkan Subjunctives and Locality. In *Comparative Syntax of Balkan Languages*, edited by Maria-Luisa Rivero and Angela Ralli. Oxford University Press.
- Stowell, Tim. 1982. The Tense of Infinitives. *Linguistic Inquiry* 13, 561-570.
- Sylvain, S. 1936. Le créole haitien, morphologie et syntaxe. Wetteren, De Meester.
- Terzi, Arhonto. 1991. PRO and Obviation in Modern Greek. In *Proceedings of WCCFL 10*, 471-482.
- Terzi, Arhonto. 1997. PRO and null case in finite clauses. *The Linguistic Review* 14, 335-360.
- Thráinsson, Höskuldur and Sten Vikner. 1995. Modals and Double Modals in the Scandinavian Languages. In *Working Papers in Scandinavian Syntax* 55, 51-83. Lund, Sweden: Department of Scandinavian Linguistics, University of Lund.
- Thráinsson, Höskuldur. 1986. On Auxiliaries, AUX and VPs in Icelandic. In *Topics in Scandidavian Syntax*, edited by L. Hellan and K.K. Christensen, 235-265.
- Thráinsson, Höskuldur. 1990. A semantic reflexive in Icelandic. In *Modern Icelandic Syntax*, edited by Joan Maling, Annie Zaenen, 289-307. Academic Press, San Diego.
- Thráinsson, Höskuldur. 1993. On the Structure of Infinitival Complements. In *Harvard Working Papers in Linguistics* 3, 181-213, edited by Höskuldur Thráinsson, Samuel D. Epstein and Susumu Kuno. Distributed by the Department of Linguistics, Harvard University, Cambridge, MA.
- Uriagereka, Juan. 1988. *On Government*. Doctoral dissertation, University of Connecticut. (Distributed by MITWPL, Department of Linguistics and Philosophy, MIT.)

- Uriagereka, Juan. 1997. Formal and Substantive Elegance in The Minimalist Program. On the emergence of some Linguistic Forms. In *The Role of Economy in Grammar*, edited by M. Bierwisch, H.M Gartner and. Ch. Wilder. Akademie Verlag, Berlin.
- Uriagereka, Juan. 1998. *Rhyme and Reason: and Introduction to Minimalist Syntax*. Cambridge, Mass.: MIT Press.
- Uriagereka, Juan. 1999, Multiple Spell-out, in *Working Minimalism*, edited by Samuel D. Epstein and Norbert Hornstein, MIT Press.
- Uriagereka, Juan. 2000. Some Concepts and Questions regarding the I system. *ASJU International Journal of Linguistics and Philology*.
- Uriagereka, Juan. Forthcoming. Some Concepts and Questions regarding the I system. ASJU.
- Vriendt, S. de. 1975. Een nominativus-cum-infinitivo in Zuidnederlandse dialecten. In *Spel van Zinnen. Album A. van Loey*, edited by R. Jansen-Sieben, S. de Vriendt & R. Willemyns, 71-78. Brussel: Editions de l'Universite de Bruxelles.
- Watanabe, Akira. 1993. *Agr-based Case Theory and its Interaction with the A-bar System*. Doctoral Dissertation, MIT.
- Williams, Edwin. 1980. Predication. *Linguistic Inquiry* 11, 203-238.
- Wurmbrand, Susi 1998. *Infinitives*. Doctoral Dissertation. MIT, Cambridge, Mass.
- Zubizarreta, Maria Luisa. 1980. Remarks on Portuguese infinitives. Ms., MIT.